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ABSTRACT

This document evaluates a Human Relations Training Program for teachers in the Upper Cumberland region of Tennessee. The first part of the program, covering the period from the summer of 1968 to June 1969, is considered in detail in Appendix B. It included a 2-week summer laboratory and 14 Saturday meetings for 150 participants. The second period, extending to July 1970, included a 3-week program involving 71 teachers who gave subjective reactions to the program 3 weeks after it concluded. Follow-up interviews with 19 participants 6 months later confirmed that significant changes in self-realization had occurred. The purpose of the evaluation was to assess the effects of the Training Program on participants and use was made of internal and external criteria and matched control groups. Measurement was by F Scale, Personal Orientation Inventory, Semantic Differential, Leary's Interpersonal Checklist, the Motivation Analysis Test, Ryan's Rating Scale, and the Michigan Picture Test. The results of these tests are examined in detail and indicate that the teachers taking part in the program became less authoritarian and more self-actualized, developed greater self-insight and leadership skills, and were perceived more positively by their supervisors and students. [Not available in hardcopy due to marginal legibility of original document.] (MBM)

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# Final Evaluation Report

# A Humanistic Approach to In-Service Education for Teachers

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Project Upper Cumberland, Title III ESEA

1967-70

By

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June 30, 1970

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July, 1970

J. L. Khanna

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## INTRODUCTION

This is a report on the evaluation of the Human Relations training program for the year 1969-70. This report will endeavor (pp. 78—100) to evaluate this Title III program in terms of Phase IV of the guidelines of the State of Tennessee evaluation procedures for Title III programs ( 3 , p. 37 ). Phase IV of the guidelines is described in the following words:

> Final evaluation, the fourth phase in the model, provides for evaluating the effectiveness of the total project or program by comparing its results with the needs it was designed to fulfill and the objectives which were to be met by the program. In the foregoing section on Operational Evaluation the focus was on individual, component parts or stages of a project or program. By contrast, Final Evaluation focuses on the entire scope of the project and the determination of its success, or lack of success, in meeting the objectives specified and in satisfying the needs toward which it was directed.

An effort will also be made to critically evaluate the contributions of this program in terms of its positive contributions and drawbacks. It is necessary that this report should be read in conjunction with the Human Relations Training evaluation report of 1968-69 as cross-references will be made to this report in the present write up. For ready reference a copy of 1968-69 report is enclosed in Appendix B.

The present report will be divided into two parts. Part I will deal with the evaluation of the program during 1969-70 year. Part II will deal with the Phase IV and the critical evaluation mentioned above.

Part I will describe:

A. The nature of the sample.

B. Design and procedure.

C. The instruments used and the results obtained.

D. Implication of the results.

E. Summary and conclusions.

Relevant statistical tables are included in the report, for those readers who might be interested in these. Detailed statistical analyses are available from the writer on request.

# PART I

## DESCRIPTION OF THE SAMPLE

Before the actual description of the sample, some characteristics of the region from which this sample was selected will be described. While discussing this region, Norman (21, pp. 4-6) says,

> Until very recently, commerce and industry found the geography of the upper Cumberlands too difficult to deal with and by-passed the region, leaving it in semi-isolation. The upper reaches of the Cumberland river were too shallow for tugs and barges. Major highway into the region was U.S. 70 North, two lane black-topped road which almost doubled back on itself as it snaked along the ridges from east to west. A short line railroad, the Tennessee Central, served the upper Cumberlands until 1968, when it was forced to declare bankruptcy and was absorbed by three connecting lines. North-South travel was entirely dependent upon secondary roads, even more crooked and discouraging than the east-west route.
>
> Although there were some good times, relatively speaking, the region's natural resources were steadily depleted during the first half of the 20th century.
>
> The last boom came during the second World War; after that, the coal industry was forced to automate and meet the increasing competition from other forms of industry. The small mines of Appalachia, including those of the Upper Cumberlands became unprofitable and were closed by operators without much talk about what would become of the miners. Sometimes miners would report to work on Monday morning only to find closed notices tacked on mine tipples. One mine closed for its annual vacation period and then when workers returned after spending their vacation pay, presented them with a notice that the mine would no longer operate.
>
> Federal efforts to aid the poor of Appalachia formerly known as "War on Poverty Program" in the upper Cumberlands have been well intended and burdened with uncertain finances, brought on by the Vietnam War and changing bureaucratic philosophies. Soon after the act of Great Society legislation was passed in 1965, this country became involved in wide scale warfare in Vietnam and civil disturbances in urban ghettos. Concern about national ills focused on the cities. There was a tremendous outpouring of coverage of ghetto problems in the mass media. Contrasted to attention generated by urban pressure groups and militant organizations, the people of Appalachia seemed passive and scattered. National preoccupation with the cities was such

> that national planners overlooked the rural beginnings of many city problems. Or, if they recognized them, there was much urgency in the multitude of afflictions of cities like New York that the rural small town south seemed far away and was pushed further down the list of national priorities.

This region which is called Upper Cumberland Region in Tennessee comprises one-eighth of the total land area in Tennessee. This area lost nearly ten per cent of its population between 1950 and 1960, but since 1960 the trend has reversed and the region is now gaining in population due primarily to industrial, federal funds and general economic stimulation. But even as late as 1965, one-half of the households had an effective buying power of less than $2500.00. For every $100.00 that the average person in the United States had to spend, the average Upper Cumberland resident had only $49.00.

The average educational level for adults 25 years of age and over in the Upper Cumberland area is mid-seventh grade for men and approximately eighth grade for women. If each person with less than five years of schooling is classified as a functional illiterate, almost one-fourth of the adult population would fall into this classification.

Some students must ride a school bus three hours or more daily to attend school that does not provide the type of curriculum needed to prepare them to live in the last third of the twentieth century. Of the 25 high schools in the Upper Cumberland Region, 18 have enrollments of less than 500 students. Thirteen of these 25 schools offer 30 courses or fewer. Five of the school systems have enrollments of less than 2000 students. Approximately 100 schools have a four-teacher capacity or less. One-fourth of the teachers have less than a bachelor's degree.

Art, music, drama, guidance and effective programs in vocational education are almost non-existent. The number of persons per hospital bed, the number of persons for each physician and the number of persons for each dentist in the area is more than twice as large as the same ratio for the State of Tennessee

Stewart (28) has raised a basic question by saying "How do you improve education in such a region? We could all give many answers but one main ingredient which has to be considered is the classroom teacher. We could build fine buildings, provide elaborate equipment, increase expenditures and do just about anything else we wish, but the only thing that really makes the difference is the teacher. Our salaries are too low. We know that by and large we are stuck with the teachers we have and they with us." So, the argument was made that we must improve the teachers we have.

The sample consisted of 71 educators. These educators had participated in the Human Relations Training program either during 1968 or during 1969. Selection of the sample was made by the staff who had worked during the past two years with these participants. The staff was assisted by the advice of the Director and Co-director of the project.

The guiding principle of the selection was to make an effort to choose (on the basis of clinical judgements) those persons who had shown potentialities of being successful change agents in the opinion of the staff. It was not intended that the participants would become trainers after this experience, but it was hoped that perhaps they could work as co-trainers with leaders from regional universities or with one or two trainers who have formerly been connected with the Upper Cumberland

Program. In this way, it was hoped, that local school systems could afford to incorporate some Human Relations Training into their inservice programs.

This sample consisted of 51% males and 49% females. Their ages ranged from 21 years to 61 years. The mean age was 45.8 years. Sixty-six percent of the participants were married. Their experiences ranged from elementary school to high school, to principal and educational administrators.

Changes in the entire sample were studied by the administration of the feedback questionnaire (pp.107-108) and Fleishman's Leadership Scale ( " ).

For a more extensive assessment of change, it was not possible to study the entire sample due to budgetary restrictions. This extensive assessment was undertaken by selecting 20 persons from the sample. These 20 persons comprised the experimental group. A comparable control group of 20 persons was also selected. Details about the selection of these experimental and control groups are given below.

The 20 persons who comprised the experimental group were chosen in a random stratified manner from the total number of participants. The strata used in the sample selection were the density of population, the participating counties, the nature of jobs and the kinds of schools from which they came. An effort was made to have an even number of males and females.

In order to select a control group, each participant in the program was asked to nominate two individuals who were similar in terms

of their age, occupation, and number of years of teaching experiences to himself, and who had not participated in the program. Half of the control group consisted of a random sample from these nominations taking care that one person was selected at least for each participant. The other half of the control group was chosen from a school system which had not been exposed to the Human Relations workshop during the three years, the assumption being that these persons would know less about this program than those who had been chosen by the experimental group.

Participants in the control group were paid $10.00 for each interview (described on page 110 ). During the workshop each participant in the experimental group was paid $15.00 for each day they attended, plus $3.00 a day for each dependent.

A statistical analysis of the ages, income, and the number of dependents of the experimental and control groups indicated that the two groups did not differ from each other significantly.

## DESIGN AND PROCEDURE

The nature of the sample, the experimental and the control groups used in this investigation have already been described (pages 4-8 ).

The exact format of the three week human relations program to which the members of the experimental group were exposed was as under:

1. One week was devoted to a programmed problem solving exercise, namely, RUPS model ( 13 ).

2. The second week was devoted to self-examination and planning for the future and the main instrument used in this case was a study of Life Style. An outline of this is given in Appendix A page 109 .

3. The third week was devoted to a discussion of "back home" problems in the school systems and their possible solutions. This involved interpersonal interactions among persons who held similar jobs. This was followed by interactions among different school faculties which in turn were followed by school systems in a county interchanging and discussing problems. Lastly, the different counties made an attempt to arrive at a solution of some of their problems.

This phase of training encouraged the participants to draw on all the skills that they had acquired in the previous two years and the preceding two weeks.

The evaluation consisted of the following steps:

1. Administration of the Fleishman Leadership Scale ( 11 ) at the beginning of the three week workshop and at the end of it to all the participants.
2. Administration of a feedback questionnaire at the end of the three week workshop to the participants. A copy of this questionnaire can be found in Appendix A, pages 107-8. This questionnaire attempted to find out the participants' perceptions in the area of their improvement of skills in problem solving, their feelings about the RUPS model, and the possible applications of the Human Relations Training program to their inservice training programs back home. It also tried to tap their feelings about the Life Plan Program and tried to elicit their ideas about their plans for problem solving in the back home situations.
3. The 20 persons who comprised the control group and the 20 persons who comprised the experimental group (the details of the selection have already been given on pages 7-8 ) were interviewed by experienced interviewers. The interview outline which was followed can be seen on page 110 of the Appendix A.

These interviews attempted to assess whether or not the interviewees felt that they had functioned differently in their job roles during the past school year as compared to the previous year or whether or not they had done things differently during this period of time.

It also attempted to assess if there were any changes in their

relationships with their superiors. An effort was made to learn more about these changes and their feelings towards their superiors. They were also asked if they related differently or felt differently towards their students and if they had instituted any new activities in their school programs during the past school years. In addition, an effort was made to find out if the teacher's community relationships had been different during the past year. The interview ended by the interviewee being asked to describe what were the experiences that changed him most in his life.

The interview took anywhere from 45 minutes to one hour and extensive nondirective probing was used by the interviewers to elicit the maximum possible information. Due to unavoidable circumstances (e.g., failure of the tape recorders to record the interviews, persons showing up for interviews who could not be considered as adequate study subjects in the light of the criteria of sample selection) only 19 interviews in the experimental group and 18 interviews in the control group were used in this study.

The interview data were content analyzed and appropriate statistical tests run. The findings on the basis of these are discussed later on pages .

4. The persons comprising the experimental and control groups were given a questionnaire with a request that it be handed over to their superiors by them for completion. This questionnaire was designed to assess the superior's perception of changes in the experimental and control groups. A copy of the question contained in this

questionnaire can be seen on page 111 of Appendix A. Only nine of the experimental group superiors and twelve of the control group superiors returned this questionnaire after completion.

It should be pointed out again that part of the evaluation, namely, the aspect concerned with the Leadership Scale and the Feedback Questionnaire used the entire sample. While the other part, namely, the interviewing, due to budget limitations, was restricted to a subsample of the participants and a matched control group.

## INTERVIEW ANALYSIS

The sample that comprised the experimental and the control groups has already been described in detail earlier on pages 7-8. A copy of the guidelines used for interviewing is contained in the Appendix A, page 110 .

Four interviewers, three of whom had been trainers in the human relations program interviewed the two groups. Interviews were taped then transcribed and content analyzed. All interviews were conducted in an open-ended manner and extensive probing was used to get the maximum possible information.

The interviews brought out a series of developments that had taken place across the state. These changes varied from county to county but did not vary for the two groups. They consisted of such things as changes in jobs within the past two or three years, changes brought about by administrative modifications made in the school systems such as consolidation of schools. It was felt that both groups had been exposed to the same sort of changes and that the changes did not constitute a hardship either in favor of or against a particular group.

Each of the interviews does carry an individual flavor and gives the picture of a person involved with particular types of problems. Only a very rough attempt will be made to make generalized statements and statistically compare groups since such statistical comparisons are not feasible without losing a good deal of the data that is available. The report therefore will content itself in being more descriptive and in attempting to bring out the responses as much as they were elicited by the various interviews.

The first question that was asked of each interviewee was, "How do you feel you have functioned as a teacher in this school year as compared to previous years?" The question had sometimes to be modified because the participants of the experimental group felt that the changes had occurred not during the past year but since their experiences in the training labs. The question was therefore generally modified to mean within the past two or three years rather than a strict chronological year.

A striking difference in the responses of the two groups (experimental and control) with very little overlap was the manner in which the question was interpreted. On the whole the experimental group perceived this question to refer to intrapersonal changes and and talked of changes in their own attitudes, their communication skills and differences in teaching methods that they had employed. The problem may have been partly compounded by the fact that nearly all the interviewers were past trainers of the sensitivity training labs so that when these trainers asked these questions the respondents assumed that they were talking about variables that they had discussed within the training labs.

The control group on the other hand generally tended to refer to changes that had taken place in the external circumstances of their jobs and talked of changes in their job, changes in the school system such as consolidation of schools, etc. A few of these, but a small minority, did refer to the changes as related to their own personalities.

In categorizing the respondents' statements in terms of whether they referred to the personal changes or to the physical changes we find that sixteen of the experimental group spontaneously referred to the personal changes and two to the physical changes whereas five of the controlled referred to personal changes and fourteen to physical changes. The differences are statistically significant at the more than .01 level ($x^2 = 13.80$) (Table I , page 16 ).

A look at the types of responses will give a flavor of the differences in the groups. The experimental group made such statements as, "The discipline in my room has changed radically. Formerly I would paddle any child who answered me in a sarcastic manner. Now I look for the why, the reason the child is misbehaving. I tell my students that they may express their opinions but they must express them in an acceptable manner." Another one stated, "I feel more comfortable. I have better relations with teachers. I know the difference between respect and fear of authority and I feel more open." Another stated, "I have learned to speak out more. I feel more 'in the group with the others.' I feel more a participant and less an observer." Another one stated, "I feel more receptive to others' suggestions and complaints." Others stated, "I look at other person's side of problems more," or "I am accepting people even when I can't accept ideas," or "I feel more aware of feelings of others."

Additional responses were such as, "I have realized a limitation within myself. That is, I am not emotionally geared for working with special types of children." Or, "I place greater emphasis on involving the whole group." Or, "I permit class discussions to stray from subject matter occasionally."

Table 1

Q. 1. Functioning as a Teacher

| Nature of Change | Experimental Group | Control Group | Total |
|---|---|---|---|
| Personal Change (including teaching methods) | 16 | 5 | 21 |
| Physical Change (New job, external circumstances, work load) | 2 | 14 | 16 |
| Total | 18 | 19 | 37 |

$x^2 = 13.80$ $p < .001$*

Some of the participants had tried to apply procedures they had learned in the training labs. Some of them said for instance that they had tried role playing in their classes or that they had allowed subordinate teachers below them to share responsibility of presiding over faculty meetings. One of the principals stated that he now involves teachers and parents to get the work done rather than taking sole responsibility for everything. Another stated that he likes to find out why a student is indifferent and used this information in compiling tests in order to get these students actively involved. Another stated that she takes initiative in finding ways to improve a child's emotional and intellectual situation.

Generally speaking the experimental group was clearly aware of their interpersonal relationships and felt that they had changed and that their function as a teacher was due to the change within themselves rather than to other changes. This is not to say that they were not aware at all of the physical changes. For instance, some of them mentioned that they had a new job or that they now taught a different type of a class than they used to or that they were now a sole teacher in a school where they had been used to being part of a team or that they had a different type of a job all together. However, as stated above the predominance of the topics mentioned referred to the interpersonal relationships with emphasis on the change having been brought about because of intrapersonal changes.

As opposed to this the control group was not that preoccupied with or that aware of their own role. With the exception of five people who referred to their personal involvement sometimes in positive and

sometimes in negative ways the majority of the group referred to the changes that had taken place in the total school structure. Their responses ranged from, "There is more apparent cooperation," to, "I have a new job, it's a different type of a job," "The curriculum is more strenuous and I have felt it necessary to teach several classes which makes me feel not completely involved in any job," or "This is my first year at a new type of school and I am teaching more academic subjects than I used to," or "We are now trying out a new method, the phonetic method, and I feel that I am not covering as much material as in previous years." There was a sprinkling of a certain amount of a sense of frustration in these adjustments to be made and there were references to such things as the teaching load being heavier, classes being larger, equipment being scarce, and more overcrowding in schools.

A few of the control group referred to changes within themselves but as mentioned above there were only five of the control group who made such statements. Some of these statements were positive. For example, one respondent said that he felt more confident in himself, he had better insight and overall had learned to cope better though he could not pinpoint the reasons. Another respondent said that she felt "more relaxed in the classroom." "I talk more to my students to discover their problems." A third one stated that he saw his role as a superintendent differently. He felt that he represented the teachers and the students more and the board of education less. A few of them were dissatisfied with what was happening. One of them felt strongly that her work had deteriorated compared to other years and another one was concerned about "dispelling my image as an angry and sour teacher." "I am trying to control my temper more."

Since there is no reason to assume that the experimental group had fewer problems to tackle with as regards the changes in job structure or in the job itself or in the school structure, it is interesting to see the differences between the two. The experimental group is very much aware of themselves and of their own change bringing about changes in things around them. They see the functioning as a teacher having differed not because of the external changes that have taken place in their life but because of the change that they have experienced within themselves. They therefore become a source of change themselves.

The second question became a little more specific and asked if they had done anything differently as a teacher in the school year (or the past two years) as compared to prior years. At a general level we find that both the groups did things differently. It seems that there had been changes in their functions as a rule.

Only one of the experimental group and only three out of the control stated that there had been no change. These differences in terms of change or no change across the two groups are not statistically significant (Table 2 , page 30).

Looking at the types of answers they gave, one finds the persistence of the earlier theme, that is, the experimental group tended more to talk about interpersonal relationships and how they could modify these as opposed to the control group which, to some extent, tended to concentrate more on changes residing as outside themselves. There is a certain degree of overlap here but the dominant themes still seem to be different. The experimental group said such things as that

Table 2

Q. 2. "Done differently" as a Teacher

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Yes | 17 | 16 | 33 |
| No | 1 | 3 | 4 |
| Total | 18 | 19 | 37 |

$x^2 = 1.80$ $p < .50$

they "try to see the students' side more." One respondent gave a specific example of the change in discipline. He said that a child who had stolen five dollars was told by him that if the child returned the money he would not be paddled, something that he would not have done in previous years. Another respondent mentioned the case of a student who she felt was not doing up to par. The teacher went out of the way to talk to the girl and to do things for her to show her that she was wanted and was liked. In both instances the respondents felt that they would not have been this aware of seeking different ways of handling children's problems.

Other members of the experimental group stated that they took special interest in problem students, that they asked students how students feel about things, that they went out of their way to communicate with those that they deal with and try and get all of them involved in the activities rather than a few. They felt that they were more expressive, that they had allowed the students to join in planning their classes, that they had let the students express themselves more, that they had asked the parents to encourage them, that they had listened more to find out what the students liked and how they felt about the instructor. One of the respondents said that she was jotting down ideas about how to help teachers have a better classroom experience. She added that she felt that she now confronts problems rather than avoids them and that she offers her own ideas with less anxiety than she used to.

A few of them referred to the specific changes that had taken place in their surroundings, for example, one mentioned that she was now

teaching all eight grades whereas she only used to teach a few grades in previous years. Some stated that they had started with "modern math" and had more instrumental facilities in the classroom than they used to. One or two had even tried sensitivity training techniques with their colleagues.

As opposed to the experimental group, the control group mentioned such things as using new work books in the courses they teach or, "I let students work more on their own and give longer lectures. Both of these changes are due to the fact that the students I am working with this year are more mature than those of last year." A third one said that she is working with the whole class and then dividing them into small groups or "that she was very involved with the new phonetic techniques being used." One person mentioned that he was handling students differently and was being more sympathetic towards the students as individuals. Some mentioned a change of subject matter or the type of work that they used. One person had sent a survey to parents concerning children's reaction to the kindergarten to better understand the school or that they had worked especially hard to change some of the programs. Generally speaking, it seems that the control group teacher does not see himself as the change agent as much as the experimental group does.

The next question (Question 3) referred to the respondent's realtionship with other teachers or colleagues. Here again we get rather striking differences in the two groups.

The experimental group talked in terms of greater awareness of others, of better communication with others, of greater acceptance

of others, and of being more open to others. None of them felt that there had been any negative interaction with other teachers or colleagues. In contrast to this, the control group predominantly (14 out of 19) stated that there had been no change in their relationships with their colleagues. Three of the controls had some negative statements about their relationships and one had some positive statements. Categorizing the responses in terms of emphasis on awareness, openness, or communicatinn as opposed to no change and a negative change across the two groups, we get a statistically significant difference (chi-square 31.20 significant beyond the .001 level) (Table 3 , page 24).

A look at the type of responses given by the two groups show that the experimental group tends to talk about such things as, "I'm more conscious of the complexity of things," "I place greater emphasis in working together and therefore am more cooperative," "I try to see how others feel," "I try to hear the problems more," "I'm more sensitive to others' problems," "I'm more aware of teachers' feelings and talents through communication," "Association with other teachers has helped me more than anything else," "I do less prejudging of a problem and am more accepting of a problem," "I feel more a part and they seem closer to me. I feel I can talk to them more," "I do not feel as shy and speak out more in inter-relationships," "I make a conscious effort to be tolerant of others' views if they are different from mine."

The control group, on the other hand, predominantly felt that there had been no change in their relationships. It seems that in this context the socially desirable response as seen by the control group was one of no change with implications of that connoting steadfastness

Table 3

Q. 3. Related Differently to Other Teachers or Peers

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Changed in a positive manner | 17 | 1 | 18 |
| Changed in a negative manner | 0 | 3 | 3 |
| No change | 0 | 14 | 14 |
| No reply | 1 | 1 | 2 |
| Total | 18 | 19 | 37 |

$x^2 = 31.20$ $p < .001$*

and loyalty. As mentioned above, one person mentioned that the change had been in a positive direction. She stated that she now had more meaningful relationships with the other teachers. This respondent attributed this change to an inservice program. The three negative responses consisted of such things as the respondent feeling that the other teachers were not working as hard as she was or that there was not as much "cooperation as there used to be" or "there is less contact between the teachers than there used to be."

Question four specifically asked about any change in activities within these relationships with other teacher or peers. A look at Table 4 indicates that ten out of the control and five out of the experimental group felt that there had been no change in activities. Twelve, that is a majority of the experimental group, felt that the change had been of a positive nature. None of the control groups felt that the activities had changed in a positive direction. One each in both the groups felt that the change had been in a negative direction and one out of the experimental and three out of the control felt that the changes could be attributed to new jobs. Lastly, one out of the experimental and four out of the control did not refer to this topic. Statistically speaking, we find that the differences between the two groups are significant at the .01 level (chi square 19.21).

A look at Table 4 shows that the greatest amount of variance occurs in the perception of change or no change and the change being positive (rows 1 and 2). The specific responses given by the participants, reveal that the experimental group referred to such things as better communication, better involvement with others in similar activities,

Table 4

Q. 4. Activities Differed in Relation to Teachers or Peers

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Changed in a positive direction | 12 | 0 | 12 |
| Changed in a negative direction | 0 | 2 | 2 |
| No change | 5 | 10 | 15 |
| New job | 0 | 3 | 4 |
| No response | 1 | 4 | 5 |
| Total | 18 | 19 | 37 |

$x^2 = 19.21$ $p < .001$*

better participation, etc. Some of the examples of types of responses in this connection were, "I gave advice to a new teacher upon request which I would not have done before," or "I gave a program on sensitivity training that got the teachers involved," or "Tried unsuccessfully to start a sensitivity training group but am trying to change meetings to make them more interesting and am trying to gain more political power for the teachers." Some others stated that they were trying to encourage teachers to actively participate in faculty meetings by allowing them to share the task of presiding over meetings. Some others still felt that they were trying to work as a team on similar problems or "work more closely with peers."

Three out of the control group felt that the change had been towards a negative direction. Their responses consisted of such things as "I don't associate with the teachers because they are catty," or "There is a lack of trust and not as much interaction as there used to be, I do not feel at ease," or "Relationships have gotten bad because of the political split." Three of the control group felt that new jobs had brought about changes which had led to different types of activities with these peers. They mentioned changes in the structure of their roles which had led to more or less contact with their peers.

The next two questions dealt with the respondents' relationships with their superiors and any particular kinds of activities that had changed in this context. Question five dealt with their relationship with their superiors and question six with their particular activities. The group differences are not so pronounced in these cases

as they have been in the variables dealt above. The groups did not show any particular change in their relationships with their superiors (Table 5 , page 29 ). Five out of the experimental group and six out of the control felt that there had been no change. Eleven out of the experimental and nine out of the control felt that the change had been a positive one. The remaining members of the two groups felt that the change had either been a negative one or had not really occurred in such a way as to be assessed because of the change in the job.

It may be interesting to see in what manner the two groups talk about the positive relationship with their superiors. The experimental tends to talk more about better communication with their superior, feel that they are more accepting of their relationship or a combination of the two. Some of the respondents stated that they felt freer to express their opinion, they felt less inferior and felt more confident in their relationships, some felt that they had been of more help to their principal, or felt closer to the principal especially the ones who had had sensitivity training.

The control group when talking of their positive relationships talk about feeling closer to the superintendent. The control group mentioned such things as being able to see the superintendent more because of the new job or that they felt closer to the superintendent because of the political situation within the board of education. Some of the negative comments made by the group were that they felt that in one case the superior had neglected the job because of political differences and another that the size of the faculty of the school

Table 5

Q. 5. Relation with Superiors

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Changed in a positive direction | 11 | 9 | 20 |
| Changed in a negative direction | 1 | 3 | 4 |
| No change | 5 | 6 | 11 |
| New job | 1 | 1 | 1 |
| Total | 18 | 19 | 37 |

$x^2 = 4.08$ $p < .30$

had made it harder to see the principal comparatively speaking or that the new principal was not a very good communicator.

Question number six dealt with any differences in the school activities involving the superiors as such. Here again there are no striking differences between the groups (Table 6 , page 31 ). Four out of the experimental and seven out of the control group felt that there had been no differences in activities. Eight of the experimental group and three out of the control group felt that there had been new activities which they regarded in a positive manner. Some of the participants mentioned a change in attitude towards a positive direction but the total differences here, though more marked than in the question five, were not statistically significant ($x^2=9.18$, $p<.10$).

Questions seven and eight dealt with the relationship of the respondent with students or their subordinates. It dealt with their relationships with the students or their subordinates if the respondent happened to be a principal or a board of education member. In this case the differences between the groups were again not marked and did not approach statistical significance (Table 7 , page 32 ). Two out of the experimental group and six out of the control group felt that their relationships with the students had not changed in the immediate past. Fifteen out of the experimental group and eleven out of the control mentioned specific relationships with the students and felt that these had changed for the better. Two out of the control group and none out of the experimental group felt that their relationships with the students had deteriorated.

Some of the examples of the types of responses given by the

Table 6

Q. 6. Activities in Relationship with Superiors

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Changed in a positive direction | 8 | 3 | 11 |
| Changed in a negative direction | 0 | 3 | 3 |
| Changed in job structure hence no comparison possible | 2 | 5 | 7 |
| Change in attitude (positive) | 4 | 1 | 5 |
| No change | 4 | 7 | 11 |
| Total | 18 | 19 | 37 |

$x^2 = 9.18$ $p < .10$

Table 7

Q. 7. Relationship with Students or Subordinates

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Changed in a positive direction | 15 | 11 | 26 |
| Changed in a negative direction | 0 | 2 | 2 |
| No change | 2 | 6 | 8 |
| No response | 1 | 0 | 1 |
| Total | 18 | 19 | 37 |

$x^2 = 5.65$ $p < .20$

experimental group concerned chiefly with sensitivity, more openness and acceptance. For example, some said that they listened to the students more than they used to in trying to find out how they felt. Others stated that they listened to their teachers if these happened to be their subordinates for ideas and suggestions which they had not previously done and that they were more considerate of the subordinate's feelings. Some of them also felt that they had made fewer snap-judgments and listened to the different points of view, they trusted others more and felt more confidence in their ability to better communicate than they had previously been able to do. There seemed to be, particularly for the experimental group, a certain amount of redundancy in the answer to this question and to question number one. Question number one had to a great extent dealt with these same kinds of matters though there the respondents had spontaneously interpreted the question to involve relationships with the students.

The control group mentioned such things as that they were being better accepted by the subordinates or that some of the particular political situations had became more conducive to better relationships or that they felt closer to the students or that they felt more responsible for the students or that they found the subordinates more friendly. The respondents in the control group who felt that the relationships had deteriorated felt that they had trouble getting through to the students, found that there was an increase in cheating and that there was a lack of interest on the students' part. Another respondent felt that he could not get as close to the students because of the changes in the school structure chiefly the greater enrollment

in the schools and the larger school group as such and missed the close contact that he had had in previous years.

Question eight dealt with any activities related to students that had been changed in these years. Here again we find that the groups seem to be somewhat different. The chief area of difference appears to be what we have termed self-initiated activities, that is, activities that were instituted by the teacher or the superior in question. Table 8 , page 35 shows that two of the experimental and eight of the control felt that there had been no change in activities. Compared to this thirteen out of the experimental mentioned specific activities that they themselves had initiated and four out of the control mentioned such activities. Some of the members of the group mentioned such things as using specific techniques in establishing more interaction with the students. They let the students take part in planning and trying to find out what the students' interests were. They also felt that they were more active in involving the student towards independent thought or dealing with the students in a more informal situations. One or two of the respondents described specific incidents where they had tried to use special games that the student could use in classwork in order to get him more involved and be a more active participant. Some felt that they were now more realistic in their dealings with problem children and that they could encourage their subordinates to work towards their problems more adequately than they used to.

The small number of the control group who mentioned particular activities that they had instituted explained that these took the form of greater emphasis on participation and less on tests or giving students

Table 8

Q. 8. Activities in Dealing with Subordinates

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Self-initiated changes | 13 | 4 | 17 |
| Externally initiated changes | 3 | 7 | 10 |
| No change | 2 | 8 | 10 |
| Total | 18 | 19 | 37 |

$x^2 = 10.14$ $p < .01$*

more work to do, or more involvement of subordinates in the meetings that took place or they themselves felt more involved in the activities that they had. A greater number of the control mentioned the change in the job as such and the changes in the activities that the job had brought because of the newness of the job or the changes in the school structure. These were regarded as externally instituted changes. The differences between these two groups along these dimensions are statistically significant at greater than .01 level ($x^2 = 10.14$) (Table 8 , page 35).

When we mention here kinds of activities there seems to be a difference in the language used by the two groups. The experimental group tends to talk about more participation, more acceptance, more involvement, more problem solving and the control group talks more on a level of how they can relate to other people. It is as if the experimental group has acquired a new set of language which they are now using in their classroom situations. To what extent the language communicates and conveys the specific nature of the activities and to what extent these activities are in fact different is difficult to judge.

The last two questions, questions nine and ten, dealt with their relationships with their community. Question nine asked if the respondent felt that he had related differently to the community during the past two or three years as compared to previous years. Question ten dealt with any activities that they had involved themselves in with regard to their communities. Here the differences between the nature of the interviews (discussed separately, see page 88 ) come a little

more pronounced because several of the respondents did not talk about the relationship with their communities. Seven out of the experimental and three out of the control did not refer to any community relationships and presumably the interviewer in this case did not specifically ask for these areas.

Apart from this we find (Table 9 , page 38) that seven of the experimental and three of the control group related different relationships in various groups. Four out of the experimental and ten out of the control felt that there had been no difference in their relationships within the community as such. The group differences are significant statistically at more than .05 level ($x^2 = 8.72$).

Examining the responses as such we find that the experimental group felt that they had joined many more groups, they were more active than they used to be, or that they had better relationships with the PTA, or that they tried to talk with the parents more, or that they had tried to mix with the people more and find out how they felt. One respondent felt that he had done less in the community than he used to.

In the control group we find that the respondents mentioned such things as spending more time in working in the PTA or the chruches. A few felt that they were doing less in the community than they used to and that the community had enlarged and it was not possible for them to be as actively involved as they used to.

The last question, number ten dealt with the activities within the community that had been different. Here again we find that the differences between the two groups are not statistically significant (Table 10, page 39). Four out of the experimental and ten out of the control felt

Table 9

Q. 9. Relationships with the Community

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| Better relationships | 7 | 3 | 10 |
| Worse relationships | 0 | 3 | 3 |
| No change | 4 | 10 | 14 |
| No response | 7 | 3 | 10 |
| Total | 18 | 19 | 37 |

$x^2 = 8.78$ $p < .05$*

Table 10

Q. 10. Activities with Relationship to Community

| | Experimental Group | Control Group | Total |
|---|---|---|---|
| More activities | 11 | 4 | 15 |
| Fewer activities | 2 | 3 | 5 |
| No change | 4 | 10 | 14 |
| No response | 1 | 2 | 3 |
| Total | 18 | 19 | 37 |

$x^2 = 6.48$ $p < .10$

that there had been no change in their activities. Eleven out of the experimental and four out of the control felt that there had been greater degree of activity in the community. Two out of the experimental and three out of the control felt that they had become less active within the community.

Examining the responses we find that the experimental group mentioned such things as visiting the community and taking more part in the local politics. A few of the experimental group mentioned introducing sensitivity training in the church, that people had become interested in sensitivity training or that they had better and closer relationships with the local county officials than they used to.

The control group in this connection mentioned such things as trying to contact more parents than they used to or generally participating more than they used to. Two of the control group felt that they were doing less, one because of illness in the past and the other that he just did not see as many parents as he used to in the past.

One of the questions asked not by all of the interviewers but by some of them was how much change the respondents felt within themselves in the past two or three years, the three years being the period when they were involved in the sensitivity training groups. It was an attempt to gauge the extent of the change that the respondents, particularly the experimental group, regarded as obvious, especially with reference to other landmarks in their life that they would regard as responsible for intrapersonal change. No quantitative analysis can be made of this answer because apparently the question was asked

in different ways by different interviewers. However, it seems that a great majority of the experimental group felt that the greatest amount of change within them had come due to the sensitivity training. Some of them mentioned other events in their life but it may safely be said that at least half of them felt that the greatest amount of change had occurred during these past three years. As opposed to this the control group mentioned several events in the course of their life not concentrated in the same period of time. They mentioned such events as a time when they had taken a new course or had been sick or had been to college or had been to the Army or there had been a death in the family or that they had been told some unpleasant things by others around them.

In summary then it appears that the two groups did react differently and do perceive the changes within themselves as being different. One of the global effect in examining through the interviews is that the experimental group has as it were acquired a new "culture." This culture constitutes of such things as talking about communication, accepting each other, greater participation, problem solving. They were also very much apparently aware of the fact that they were being interviewed by the trainers who had been instrumental in propogating such a "culture." It is a matter of speculation whether they would have given the same type of answer if they had not been questioned by the same trainers. The control group apparently has not acquired such a vocabulary and tends to express generally more negative attitudes than the experimental group does. One is impressed by the predominance of positive phrases from the experimental group. It almost

seems that the experimental group does not talk about the problems that must arise in their daily living and does not seem as aware of obstacles that they face. One of the chief differences in the obstacles when they do talk about them is that the experimental group tends to feel that they have changed and therefore have a different approach to the same problems whereas the control group tends to see the sources of change as coming from without.

## ANALYSIS OF QUESTIONNAIRE COMPLETED BY SUPERVISORS

The method of construction of this questionnaire and the method of administration have already been described on page 11 . A copy of this questionnaire is contained in the Appendix A page 111 .

In the first question regarding changes in functioning from that of previous years eight of the nine experimental group members were reported to be functioning differently, while of the control group only six of the twelve members were reported to be functioning differently. Statistical analysis by the chi square statistic with one degree of freedom (Table 11 , page 44) indicates the change made by the experimental group is statistically significant ($p < .02$). The change made by the control group is not significantly different from what would be expected on the basis of chance factors ($p = .50$). An analysis of the changes made by the experimental group indicates the individuals became more sensitive to others, expressed their opinions more freely, and were better listeners. Included in the category of becoming more sensitive to others were four responses indicating an increased emphasis upon each child as an individual, three responses indicating more understanding, one response indicating increased empathy, and one response indicating increased awareness of the feelings of others. Seven of the experimental group members were reported to more easily express their opinions and six members were reported to be better listeners. Of the six control group members who were reported to have changed, five were reported to have become more professional and only one was reported to have increased sensitivity to others.

The results of the first question suggest that in the opinion of supervisors of participants the human relations training program

Table 11

Functioning Differently

| Group | Changed | Unchanged | $x^2$ | p |
|---|---|---|---|---|
| Experimental Group | 8 | 1 | 5.44 | $p < .02$** |
| Control Group | 6 | 6 | .46 | $p = .50$ |
| Total | 14 | 7 | 3.50 | $p < .10$ |

significantly increased sensitivity in interpersonal situations and improved communication, both self-expression and receptiveness to others. The change made by the control group of becoming more professional seems consistent with additional on the job experience.

In the second question regarding teacher initiated activities seven of the ten experimental group members were reported to have initiated one or more activities, while five of the twelve control group members have initiated activities. Statistical analysis by chi square (Table 12, page 46) indicates while neither was statistically significant the experimental group tended to initiate more activities ($p = .21$) than the control group ($p = .58$).

An analysis of the activities initiated by experimental group members indicates that on the basis of the perception of supervisors four of the members' new activities dealt with instructional programs, in-service training, and curriculum changes. Two experimental group members initiated activity to improve communications among faculty, students, and parents. One experimental group member initiated sensitivity programs in faculty meetings to help the other teachers increase their understanding of their students. The activities initiated by the five control group members dealt with instructional programs, in-service training and curriculum changes.

The results of the second question suggest that in the opinion of supervisors the human relations training program increased teacher initiated activities particularly those designed to improve communications and increase understanding. Three of the experimental group members initiated activities to improve interpersonal relationships

Table 12

Initiate New Activities

| Group | Yes | No | $x^2$ | p |
|---|---|---|---|---|
| Experimental Group | 7 | 3 | 1.60 | p = .21 |
| Control Group | 5 | 7 | .33 | p = .58 |
| Total | 12 | 10 | 1.67 | p<.20 |

while none of the control group members initiated this type of activity. Approximately equal proportions of both groups initiated activities dealing with in-service training, instructional programs, and curriculum changes.

The third question ascertains if the teacher has joined or supported any new activities started by others. Eight of the ten experimental group members were reported to have joined and/or supported activities initiated by others, while five of the twelve control group members joined and/or supported activities initiated by others. Statistical analysis by chi square (Table 13, page 48) indicates the experimental group members support of other initiated activities is significant at 5% level of confidence, while the results of the control group members were not significantly different from what would be expected on the basis of chance factors.

Of the experimental group members two joined groups to improve in-service training, three worked on improving instructional programs or curriculum guides, and three tried new instructional programs. Of the five control group members who supported other initiated activities four joined groups to improve instructional methods, three of the five worked on a salary committee, one of the five worked on improving in-service training, and two of the five aided in visits by administrators and parents to their school.

The results of the third question suggests that according to the supervisors' perceptions the human relations training program increases joining and/or support of other initiated activities.

Table 13

Join Other Initiated Activities

| Group | Yes | No | $x^2$ | p |
|---|---|---|---|---|
| Experimental Group | 8 | 2 | 3.60 | p = .05* |
| Control Group | 5 | 7 | .30 | p = .58 |
| Total | 13 | 9 | 3.34 | p<.15 |

The fourth question deals with the teacher's relation to other teachers. Analysis of the results of the experimental group members indicates that nine of the ten members were reported to have above average relationships with other teachers and only one teacher was reported to have only average relationships. Of the thirteen control group members three were reported to have less than average relationships, one with average relationships, and the remaining nine members above average relationships with other teachers. The results are presented in Table 14, page 50.

While a statistical analysis was not significant the results of question four suggest that the human relations training program increased teacher-teacher relations.

The fifth question deals with the teacher's relation to students. The results of the experimental group indicate that all had better than average relationships with their students. Two of the nine members were reported to assist students with personal problems. The results (Table 15, page 51) of the thirteen control group members indicate two members have only satisfactory relationships with their students, nine have better than average relationships, and two members, both administrators, were reported to have the respect of the students but their relationship with students was undeterminable. Two members of the control group were also reported to assist students with personal problems.

Statistical analysis was not significant and differences in teacher-student relationships between the experimental and control groups are slight but do seem to suggest that the human relations training program tends to increase teacher-student relations.

Table 14

Teacher - Teacher Relations

| Group | Relationships | | |
|---|---|---|---|
| | Below Average | Average | Above Average |
| Experimental Group | 0 | 1 | 9 |
| Control Group | 3 | 1 | 9 |
| Total | 3 | 2 | 18 |

Table 15

Teacher - Student Relations

| Group | Relationships | |
|---|---|---|
| | Average | Above Average |
| Experimental Group | 0 | 9 |
| Control Group | 2 | 9 |
| Total | 2 | 18 |

The sixth question requests any additional information that might be pertinent to understanding the role of the teacher being evaluated. Analysis of the results of question six did not yield any additional relevant information.

In summary, it can be said that in the opinion of the teachers and supervisors the human relations training program significantly increased sensitivity in interpersonal relations, expressiveness of opinions, and openness to the opinions of others. The training tended to increase self-initiation of new activities and increased joining and/or support of other initiated new activities both of which suggest increased concern for improvement or at least increased communication of concern for improvement and an openness to new ideas and new techniques. The training also tended to improve teacher-teacher and teacher-student relations.

## FLEISHMAN'S LEADERSHIP OPINION QUESTIONNAIRE

In an attempt to assess the results of the three weeks program (pp. 9 ), the participants were administered the Leadership Opinion Questionnaire by Edward A. Fleishman ( 11 ). This questionnaire was administered at the beginning of the workshop and again at the end of the workshop.

The Leadership Opinion Questionnaire provides measures of two dimensions of supervisory leadership. The first measure, called consideration, provides some measure of the amount of trust, respect, and warmth between the supervisor and his subordinates. The second measure is called structure and is intended to reflect the extent to which the individual is likely to define and structure his own role and those of his subordinates toward goal achievement. The ideal situation would, of course, be for an individual to have a high score on both scales, the high score on consideration being indicative of a climate of good rapport and the high score on structure being indicative of one who plays an active role in directing group activities.

The data was grouped into four groups: a pre-group for consideration scale, a pre-group for structure scale, a post-group for the consideration scale, and a post-group for the structure scale. Using this data, two t-tests were performed on the mean scores, pre versus post on consideration and pre versus post on structure. The results of these t-tests were not significant with

the largest mean difference being .74 with means around 50.0.

In an attempt to explain the non-significant findings, it was decided to evaluate the nature of the questions being asked by the questionnaire. In doing this it was noted that the wording of many of the questions was such that it would not be applicable to the participants who were primarily classroom teachers. Such questions as those including the term subordinates do not seem applicable in the case of a classroom teacher who has very few, for all practical purposes, superiors, and one can seriously doubt that the teachers think of their students as subordinates. Also the questionnaire refers to the unit in which a person works and this term would also most likely be quite unfamiliar to classroom teachers. These questions, of course, refer to the structure part of the questionnaire.

On the consideration scale such items as treating persons under you as equals would hardly be applicable in the view of a classroom teacher. Also such things as discussing just how much work needs to be done in the classroom with the students would also be confusing to the teachers. Another item, waiting for persons in the work unit to push new ideas, also seems highly inapplicable to the classroom situation as no teacher is likely to wait for his students to suggest the next topic of study. Another item, about making decisions for what and how the people under you shall do their tasks, seems to leave only one possible answer for the teacher in the classroom situation.

Overall it would appear that while the Leadership Opinion Questionnaire might be very valid in the industrial setting, its wording simply makes it inapplicable in the present setting of classroom teachers or perhaps even any setting outside that of industry. It is fairly obvious that some such instrument is called for that could be used in a more general setting and it may be possible that the Leadership Opinion Questionnaire could be used as a basis for constructing such an instrument.

## ANALYSES OF THE FEEDBACK QUESTIONNAIRE*

A questionnaire consisting of fourteen items was administered to the participants of the workshop with the intention of finding details about their reaction to the experience. The responses were at times redundant and at times overlapped. The intention of the questions was to start from the global responses to the more specific items. The general impression is that there is a slight inconsistency in the responses of the participants in that they have sometimes made statements that have partly been contradicted in a later response. However, since this practice was not very widespread no attempt will be made here to analyze these occasional inconsistencies. The responses were examined in order of their position on the questionnaire and the data will be dealt with in that order.

Some of the questions could be answered in a "yes," "no," and "don't know" fashion. These responses were classified into mutually exclusive categories. However, other questions, namely numbers 1, 7, 11, 13(a), 13(b) and 14 were more open-ended. These responses were classified into several categories which are neither mutually exclusive nor comprehensive. Consequently, some answers were classified as falling into more than one category. The per cent in these questions are an indication of how many of the total number of respondents expressed that sentiment rather than a percentage of all the sentiments expressed. In all cases the percentages were rounded off.

*Pertinent tables pertaining to this analysis can be found on pp. 66-76.

The first question asked was whether the workshop met the expectations of the participants. Ninety-four per cent of the respondents stated that it did so, four per cent gave a qualified yes, and only one individual stated that it did not meet his expectations. He felt that there was too much "confrontation" between emerging leaders. The people who reported that the workshop did meet their expectations wholly or partially gave some details of how this was done. The responses indicated three main areas of concern. The first section (items 1 through 4 in Table 17, p.67) dealt with statements dealing with the person's self. The second section (items 5 through 7 in Table 17, p.67) emphasized the experience of the group as a whole. The third section (items 8 through 14) dealt with statements dealing with the workshop sometimes at a global level (items 8 through 10) and at others its more specific aspects (items 11 through 14). The last section dealt with statements that were categorized as "generalized."

A look at Table 17, p.67, shows that twenty-nine per cent of the respondents stated that they felt that their understanding of themselves was better. Another twenty-nine per cent felt that their relationships with other people were better. Nine per cent felt that their ability to communicate was better. Seven per cent felt that they were able to solve their problems more adequately. Some of the respondents did not talk directly about themselves but in their responses talked more of their participation as a group member. Ten per cent of these

felt that all of them understood each other better. One person mentions specifically that they were able to "air" their problems. One person felt that the opportunity to meet new people was very helpful. There were some comments made on the nature of the general workshop. Twenty-five per cent felt that the experience was relevant to their jobs. Ten per cent felt that the useful things were some specific techniques that they acquired during the experience. Seven per cent felt that the staff was good. One person specifically mentioned Dr. Busby as being good and one person mentioned that the workshop was better planned than last year. One person each also mentioned that the "RUPS" was good; one felt that it was bad. Some of the respondents felt that the experience was good but did not qualify the goodness of the experience or make any comments about how it generalized either to themselves or to their jobs or etc. This group constituted thirteen per cent.

The next question asked was if the experiences had made a person more or less competent to do inservice training, or if the degree of competence remained unchanged. Here (Table 18 , p.69 ) ninety-nine per cent of the people felt that they were more competent and one person felt that his competence had remained the same. No one stated that he had become less competent due to the experience.

The third question (Table 19 , p.69 ) dealt with their intentions to use innovative techniques in their classrooms or their feeling that these techniques were not applicable and that they did not plan to use

these. Here again the majority felt very positively and ninety-one per cent of the respondents felt that they would use innovative techniques in their classrooms. One person felt that the techniques were not applicable to the classroom and two people stated that they did not plan to use these techniques in their classroom. Three people, namely four per cent of the group, felt that the question was really not applicable at all. Since these responses were not qualified, it is difficult to assess what the group implied.

The fourth question (Table 20, p. 69 ) dealt with improvement in their skills in attacking problems. There was unanimous agreement that their skills in problem solving had improved as such.

The fifth question (Table 22, p. 71 ) dealt with their reaction to a particular section of the workshop and how meaningful the "RUPS" model was as a learning experience. The majority of the participants found the course meaningful. Twenty-eight per cent stated that it was "very meaningful" and fifty-seven stated that it was "meaningful." Thirteen per cent felt that it was only somewhat meaningful and one person felt that it was "meaningless."

Question six (Table 23 , p. 71 ) dealt with their opinion of whether "RUPS" model should be made available to all teachers in their inservice training. Eighty-five per cent of the participants felt that it should be made available and fifteen per cent had some doubts about this and could not make up their minds one way or the other.

Question seven (Table 21 , p. 70 )asked them to describe three aspects of the life plan program and how it could be adopted in their back home situations. Twenty-one per cent of the respondents did not given any response to this particular aspect. Nineteen per cent mentioned "life focus and goals." Six per cent felt that it could point out common problems and another six per cent felt that it could help them understand values of the students. Twelve per cent felt that it could help them solve and understand their family, church, or the P.T.A. Nineteen per cent felt that they could understand the faculty and teachers somewhat better. Thirteen per cent mentioned one specific technique or the other. The thirteen per cent consisted of almost one person each mentioning such things as strength "perception bombardment," "life chart plan," "peak and weak experiences," "Joe-Harry window." Six per cent mentioned that the obituary and epitaph were helpful. Seven per cent felt that the feedback practice could be applied to the back home situation. Three per cent felt that the life plan program was partially useful and one person felt that it was of no help to him.

The eighth question (Table 24 , p. 71 ) asked whether they would recommend the life program to another group of teachers. The majority of the respondents felt that they would and a small minority either did not respond or felt that they would not. Ninety-one per cent of the respondents felt that they would recommend the life plan program to other sets of teachers and two people felt that they would not and six per cent did not give any opinion at all.

The ninth question (Table 26, p. 73) dealt with the usefulness of Dr. Busby's talk. Here the range of opinions is somewhat more varied. Sixteen per cent felt that the talk was "very useful" and forty per cent felt that it was "useful." Another large section, thirty-eight per cent felt that it was only slightly useful and four per cent felt that it was not useful at all and one person did not respond to the question.

The tenth question (Table 27, p. 73) dealt with the success of the triad T-groups and the degree to which they could make use of the learning opportunities provided in that experience. The majority of participants, namely sixty-two per cent, felt that it was successful and could be applied a great deal. Thirty-seven per cent felt that it could apply to some extent and one person felt that it could apply to a very small degree.

Question eleven (Table 25, p. 72) dealt with how their learning opportunities in these triad T-groups could be improved. The responses ranged over a series of topics. Fifteen per cent felt that their experiences could be improved by listening better. Presumably they referred to their own behavior in this case. Thirty-one per cent felt that if they could share their thoughts more or generally get more involved with the group the experience would be more meaningful. Twelve per cent felt that they needed more feedback. Some of these respondents specifically mentioned the need for more negative

feedback. Another large segment felt that more time needed to be spent on these experiences. This constituted eighteen per cent of the respondents. Thirteen per cent were critical of the trainers and stated that better trainers would have meant better learning experiences and one or two within this group felt that better planning, especially extraneous noise, that could be eliminated would have added to the experience. Ten per cent either did not know or had no suggestions to make. Nine per cent of the people did not respond. One or two people mentioned that the groups should have been smaller or that there should have been more exercises.

The twelfth question (Table 28 , p.73 ) dealt with their assessment of their involvement and commitment to their back home plans from this learning experience. A fairly large majority, namely sixty-five per cent of the participants, felt that their involvement could be rated as being pretty high, thirty-four felt that it was only some and one person felt that there was very little involvement.

Question thirteen (Table 29 , p.74 and Table 30, p.75 ) asked what experience concerning the problem solving back home helped them the most and what experiences in that same section of the workshop helped them the least. To the first section of the question (Table 29 , p.74), namely what helped them the most, ten per cent gave no response. Three per cent felt that nothing helped them the most. Twenty-four per cent felt that the "Force Field Analysis" helped them the most. Ten per cent

felt that the involvement of the county members was the most useful. Twelve per cent felt that the experience consisted of problems being brought out and some of them being solved. Three per cent felt that it led to a greater involvement on the part of others and four per cent felt that it involved into selecting specific problems. Nine per cent felt that it brought out a sense of priority of what things are most necessary. Six per cent felt that the T-group aspect of the experience was most helpful. Four per cent felt that the similarity of problems occurring across the groups seemed helpful to them. Another six per cent felt that the fact that almost everybody participated equally was the most helpful. One person each mentioned some specific item such as the fact of "staying in the group and fighting it out," "feedback," "commitment to tasks and to goals," "RUPS model," and "building the monument." One person felt that the whole experience had little use for him. In the second half of the question (Table 30 , p.75) where they were asked to mention what experiences were least helpful, forty-six per cent did not respond whereas four per cent stated that everything was useful. Three per cent felt that the need to get consensus was least helpful and seven per cent felt that too much time was spent on "reporting." Three per cent felt that knowing the long range goals that are not capable of being solved was not helpful and another three per cent felt that writing things down that would not be carried out anyway was not helpful. Seven per cent felt that "building the monument" was least helpful. A number of people mentioned one specific

item as such. These varied from saying that the last section of the workshop or the methods of gaining confidence from people or the lack of adequate time for the triads were least helpful. One respondent each also mentioned such things as that the teachers did not want to bring the issues out and were very stubborn, another mentioned a lack of discipline in the group or a lack of thoughtfulness or explosive remarks or emphasis on sexual jokes by the trainer. However, these responses were given by a total of thirteen per cent. This cannot be constituted as one category since the responses covered a wide range of complaints though only one person mentioned the specific complaint in each case.

The last question, number fourteen (Table 31 , p. 76) asked for any additional comments that the respondents wanted to make. Here a large section, namely forty-three per cent, did not make any comments. Eighteen per cent of the respondents hoped for personal benefits out of the workshop. Another nineteen per cent commented that the experience was either enjoyable or useful to them. Another equally large section of the respondents, namely about twenty per cent, mentioned one specific event at a time. These responses ranged so widely over a range of topics that they could not be categorized into small categories and in each case only one person mentioned that particular item. The respondents stated that the workshop was helpful for poverty, another thought it was helpful to the county program, a third was critical of a trainer, another was critical of a trainer because of too much emphasis on sex, another was critical of the superintendent and the principal,

another felt that the participants had reacted the way it had been planned (presumably by the trainers). One felt that there was too much structure and one felt that it might be useful for other people but he did not think it did him any good. It may be stated that the fourteenth question was somewhat redundant and most of them had already made some statements under question one and had given their opinions in that matter.

Looking over the tables it might seem that there was one individual who felt that he got absolutely nothing out of the workshop he had expected. An exmaination of the responses shows that it was not the same individual who said that he got nothing but invariably one person felt that he got nothing out of the specific section of the workshop and not the same person replied in the negative under the various items.

In summary it may be stated that the general response was positive. The majority of the participants were satisfied with the way the workshop was run. There are instances of specific complaints spread over the range of responses. Numerically, they constitute a minority. How relevant and how focal these criticisms are can only be determined in view of the general goals of the workshop.

Table 16

Q 1. Did the workshop meet your expectations?

| | No. | % |
|---|---|---|
| Yes | 64 | 94% |
| Yes and No | 3 | 3% |
| No | 1 | 1% |

Table17

Q 1. Ways in which workshop met expectations

| | | No. | % |
|---|---|---|---|
| <u>Emphasis on self</u> | | | |
| 1. | "My understanding of self is better." | 20 | 29% |
| 2. | "My understanding of relationships with others is better." | 20 | 29% |
| 3. | "My ability to communicate is better." | 6 | 9% |
| 4. | "My ability to solve problems is better." | 5 | 7% |
| <u>Emphasis on group</u> | | | |
| 5. | "All of us understand each other better." | 7 | 10% |
| 6. | "We aired our problems." | 1 | 1% |
| 7. | "We met new people." | 1 | 1% |
| <u>Emphasis on workshop</u> | | | |
| 8. | "Workshop was relevant to my job." | 17 | 25% |
| 9. | "Workshop was relevant to student-teacher relationships." | 1 | 1% |
| 10. | "Workshop offered good techniques." | 7 | 10% |
| 11. | "Workshop staff was good." | 5 | 7% |
| 12. | Workshop better planned | 1 | 1% |

Table 17 (Cont'd.)

| | No. | % |
|---|---|---|
| 13. RUPS was good | 1 | 1% |
| 14. RUPS was bad | 1 | 1% |
| **Generalized statement without reference to specifics** | | |
| 15. Generally good | 9 | 13% |

Table 18

Q 2. Competency to do In-Service Training

| | No. | % |
|---|---|---|
| A. More Competent | 67 | 99% |
| B. Less Competent | 0 | - |
| C. Remained the Same | 1 | 1% |

Table 19

Q 3. Plans to use Innovative Technique

| | No. | % |
|---|---|---|
| A. Yes | 62 | 91% |
| B. None Applicable | 1 | 1% |
| C. No | 2 | 3% |
| Question not applicable | 3 | 4% |

Table 20

Q 4. Skills in Problem Solving

| | No. | % |
|---|---|---|
| A. Improved | 68 | 100% |
| B. Not Improved | 0 | - |
| C. No | 0 | - |

Table 21

Q 7. Description of three aspects of Life Plan Program that could be adopted to back home situations.

| | No. | % |
|---|---|---|
| 1. No response | 14 | 21% |
| 2. Life Focus and goals | 13 | 19% |
| 3. Points up common problems | 4 | 6% |
| 4. Helps solve problems | 4 | 6% |
| 5. Helps in understanding student values | 10 | 15% |
| 6. Helps in understanding family, church, or PTA | 8 | 12% |
| 7. Helps in understanding faculty and teachers | 13 | 19% |
| 8. Mention of specific techniques, e.g., life-chart, peak and weak experiences and Jo-Harry window | 9 | 13% |
| 9. Obituary and epitaph | 4 | 6% |
| 10. Feedback | 5 | 7% |
| 11. Partially good | 2 | 3% |
| 12. No help | 1 | 1% |

Table 22

Q 5. RUPS Model

| | No. | % |
|---|---|---|
| A. Very Meaningful | 19 | 28% |
| B. Meaningful | 39 | 57% |
| C. Somewhat Meaningful | 9 | 13% |
| D. Meaningless | 1 | 1% |

Table 23

Q 6. Should RUPS Model be made available?

| | No. | % |
|---|---|---|
| A. Yes | 58 | 85% |
| B. No | 0 | - |
| C. Am Not Sure | 10 | 15% |

Table 24

Q 8. Would you recommend the Life Plan Program?

| | No. | % |
|---|---|---|
| A. Yes | 62 | 91% |
| B. No | 2 | 3% |
| Did Not Answer | 4 | 6% |

Table 25

Q 11. How learning opportunities could be improved in the Triad T-Group

| | No. | % |
|---|---|---|
| 1. No response | 6 | 9% |
| 2. By listening better | 10 | 15% |
| 3. By sharing thoughts or by becoming more involved | 21 | 31% |
| 4. By more feedback | 8 | 12% |
| 5. By all participants being from the same county | 2 | 3% |
| 6. By fewer people | 1 | 1% |
| 7. By more exercises | 2 | 3% |
| 8. By more time being spent on it | 12 | 18% |
| 9. By having better trainers or better planning | 9 | 13% |
| 10. No suggestions | 7 | 10% |

Table 26

Q 9. Usefulness of Dr. Busby's Talk

| | No. | % |
|---|---|---|
| A. Very Useful | 11 | 16% |
| B. Useful | 27 | 40% |
| C. Slightly Useful | 26 | 38% |
| D. Not Useful | 3 | 4% |
| Did Not Answer | 1 | 1% |

Table 27

Q 10. Success of Triad T-Groups

| | No. | % |
|---|---|---|
| A. A Great Deal | 42 | 62% |
| B. Some | 25 | 37% |
| C. Very Little | 1 | 1% |

Table 28

Q 12. Involvement and Commitment to Back Home Plans

| | No. | % |
|---|---|---|
| A. A Great Deal | 44 | 65% |
| B. Some | 23 | 34% |
| C. Very Little | 1 | 1% |

Table 29

Q 13a. Experience that was helpful in the "Problems solving for back home" section.

| | No. | % |
|---|---|---|
| 1. No response | 7 | 10% |
| 2. None were helpful | 2 | 3% |
| 3. Force field analysis | 16 | 24% |
| 4. Involving of county personnel | 7 | 10% |
| 5. Problems were brought out and solved | 8 | 12% |
| 6. Getting others involved | 2 | 3% |
| 7. Selecting the problems | 3 | 4% |
| 8. Realizing "things that are necessary" | 6 | 9% |
| 9. T-groups | 4 | 6% |
| 10. Similarity of problems | 3 | 4% |
| 11. Understanding PTA organization | 1 | 1% |
| 12. Feedback | 1 | 1% |
| 13. Commitment to the task | 1 | 1% |
| 14. RUPS | 1 | 1% |
| 15. Building the monument | 1 | 1% |
| 16. Equal participation by all | 4 | 6% |
| 17. Staying in the group and "fighting it out" | 1 | 1% |
| 18. "Going from large perception to small detail" | 1 | 1% |

Table 30

Q 13b. Least helpful experience in the problem solving for back home.

| | No. | % |
|---|---|---|
| 1. No response | 31 | 46% |
| 2. Was bored by some | 1 | 1% |
| 3. It was all useful | 3 | 4% |
| 4. Giving consensual answers | 2 | 3% |
| 5. Too much time spent on reporting | 5 | 7% |
| 6. Large group work | 1 | 1% |
| 7. Knowing long range goals that are not soluble | 2 | 3% |
| 8. Writing things that will not be carried out | 2 | 3% |
| 9. Not enough time for triads | 20 | 30% |
| 10. Noise | 2 | 3% |
| 11. Monument | 5 | 7% |
| 12. The last section | 1 | 1% |
| 13. Methods of gaining confidence in people | 1 | 1% |
| 14. Teachers being stubborn | 1 | 1% |
| 15. Lack of discipline | 1 | 1% |
| 16. Brainstorming | 1 | 1% |
| 17. Force theory | 1 | 1% |
| 18. Triads | 1 | 1% |
| 19. Specific behavior of trainers | 2 | 3% |

Table 31

Q 14. Additional comments

| | No. | % |
|---|---|---|
| 1. No response | 30 | 44% |
| **Negative or partially negative comments** | | |
| 2. Criticism of a trainer | 2 | 3% |
| 3. Too much emphasis on sex | 1 | 1% |
| 4. Too much structure | 1 | 1% |
| 5. Criticism of superintendents and principals | 1 | 1% |
| 6. "We reacted the way it had been planned" (connotation of hidden agenda) | 1 | 1% |
| 7. Useful for others but not me | 1 | 1% |
| **Positive remarks** | | |
| 8. Hope for personal benefits | 12 | 18% |
| 9. Enjoyable or useful experience | 13 | 19% |
| 10. Best workshop so far | 1 | 1% |
| 11. Helpful for problems of poverty | 1 | 1% |
| 12. Helpful for the county | 1 | 1% |
| 13. Meet new people | 1 | 1% |
| 14. Other teachers should also get it | 1 | 1% |
| 15. More aware of new people | 1 | 1% |

# PART II

## FINAL EVALUATION

As has been mentioned earlier ( p. 1 ) this section will attempt to evaluate the three years Human Relations Training Program. An effort will be made to discuss the shortcomings and achievements of this program. In the end the program will be evaluated in terms of the overall goals of Title III as stated in Design for Tennessee Assessment and Evaluation of Title III ESEA ( 3 ). This evaluation of the Title III program will be concerned only with the Human Relations Training aspect of this Title III program because the writer has not been involved in any other aspect of this particular Title III program, hence, he is not in a position to make any judgements in any other context.

Shortcomings.

Shortcomings of this program will be discussed under the following general headings:

a. Administrative and budgetary limitations;

b. Theoretical, methodological and design shortcomings.

Administrative and Budgetary Limitations.

If the writer were asked to list the one single most important limitation in this program, it would have to be the budgetary restrictions. During the third year of the program the budget was transferred from the federal government to the State government and adequate monies needed for a comprehensive evaluation of the Human Relations Program could not be budgeted according to the advice given to the writer by the director of the project. For instance, during the planning stages of the third year program the writer specifically recommended that adequate

funds should be made available for travel of the researchers for data collection, and for payment of the subjects in the control group. As the research progressed, the writer was advised that no such funds were available and that he had to make the best use of the limited funds available. In the writer's opinion this definitely effected the comprehensiveness of the last year's evaluation. No funds were available to hire adequately trained interviewers nor were any funds available to train untrained interviewers adequately. As is evident from Part I, clinical interview formed the foundation stone of the third year's evaluation. In the writer's opinion a scientific evaluation is far more important for future planning even at the expense of extensiveness of any program.

It must be stated that the director of the project was quite cooperative and helped the writer in all manners possible within the budgetary limitations.

For reasons unknown to the present writer, no systematic evaluation was planned during the first year of the program in spite of the state guidelines ( 3 ) being very clear about the necessity of doing so. Towards the end of the first year's program at the writer's insistence with the then project director, he was allowed to prepare a rough and hurried questionnaire to get a quick feedback from the participants. These responses were tabulated and the results presented at the Tennessee Psychological Association's annual meeting ( 28 ). It is felt that so far as a comprehensive evaluation is concerned no effort was made towards it during the first year and this had to be an administrative decision. It was at the writer's insistence that the

project director during the second year of the program decided to think seriously about an evaluation. The report on these findings is enclosed in Appendix B.

Theoretical, Methodological and Design Shortcomings

It would be helpful to give a brief overview of the project as it is hoped that this will make the criticisms in this area more meaningful.

Human relations training techniques were used with educators and educational administrators in the Upper Cumberland Region for a period of three years. At this point we might take a broad look over what transpired and come up with some statements about what might be done for the future or what indications one can arrive at from a general examination of the whole program.

Briefly, let us examine what transpired. In the first year of the program a group of educators recommended by their superiors for human relations training program were sent to a central location where they went through two weeks of human relations training and met subsequently on a number of Saturdays. As has been mentioned above, accept for the administration of a hurriedly prepared feedback questionnaire for the first year no assessment of changes taking place was made.

The second year 150 participants went through a similar experience. At this t ime, a comprehensive assessment program was instituted. A complete report of this program has already been submitted (Appendix B). Measures derived from such different theoretical models of personality as Leary, Cattel, Sheestrom (15, 1, 35), and Frankel-Brunswik ( / ) were used in order to assess these changes. Not all of the 150 were apparently present at the several points in time when the tests were given but for the most part the large majority of

the 150 took a pretest consisting of several measures at the beginning of the human relations training laboratory. They took post-test I right after the three week intensive training period and a post-test II after six months of the training period. A control group of 50 went through the pretest procedures and the post-test II procedures. Practical financial limitations did not allow the control group to get the testing at the time of the post-test I.

In summary, the results of the massive assessment program were that the participants had changed and that the change had occurred in different directions and at different places (see Appendix B).

The massive assessment program also attempted to see if those who came in contact with these participants, namely, their superiors and their students, perceived them differently. Here again, some differences were found (see Appendix B).

During the third year of the program only 71 participants were involved in another series of human relations training techniques (p. 6 ). At this time, no large scale assessment was attempted since it would have essentially been a duplication of the assessment done in the second year. These participants, however, gave subjective reactions to the intensive training program at the end of the three weeks.

Approximately six months later, 19 of these participants (experimental group) were followed up in interviews.

It was decided to use intensive open-ended clinical interview techniques for the third year to gather as much information as possible about the changes based on the external criteria (p. 4 , Appendix B) and to supplement the findings of the second year about the external criteria changes.

A group of 18 other educators and educational administrators (control group) were also interviewed in order to make comparisons. A still smaller number of principals of these two groups, namely, nine of the experimental group and 12 of the control, sent back the ratings of these persons concerned. We, then, have varying degrees of data collected at various times.

As reported earlier, it is apparent that the participants in the human relations program training changed along various dimensions. In order to get a clearer picture of what kind of changes occurred and in what directions these changes took, one might proceed by first asking what is meant by the "human relations training techniques." As we know ( 4 ), the terms connote different programs for different groups. Each set of trainers sets up a different type of a training program, depending on his theoretical allegiance as well as value systems. Looking at the program itself as described elsewhere (pp. 78-80), we find that the program changed and evolved from the first year to the third year. The trainers themselves changed though a few of them remained constant over the three years. The program evolved as a function of what the trainers who stayed within the program regarded as the most useful experience for the teachers. One would assume that these judgements were based on the trainers' prior experiences with the types of groups that they had dealt with. It would be interesting to see what role the trainers played in this enterprise. As the psychotherapy research has shown (Marmor), any such person playing such a dominant role in a group invariably transmits his value systems to those who come in close contact with him. It would be interesting, therefore, to know

what the value systems of these trainers were. We do not as yet have any stated goals of the trainers or of the program as such apart from a global statement that the intention was to make the teacher more effective.

Since the assessment program in the second year showed that all types of changes occurred in the participants, the value systems of the trainers could be made a point of inquiry and one of focal interest in a similar enterprise in the future. We do know from the literature that during recent years greater and greater emphasis has been placed on what may best be described as the experimenter variable, that is, the participant observer plays a more active role than had been assumed previously. It would, therefore, be logical for any major assessment program to take into account the differences within the trainers and how these differences in their interactions with the participants relate to the changes brought about within the participants. At the present juncture, a certain amount of selection within the trainers took place. One would presume that these were due to such factors as interpersonal relationships between the trainers, their own life situations, their degree of involvement in the program, and such other matters that were conducive to their making judgements in one direction or another. So one of the major points not covered in the present assessment program is the role of the trainer; the effects his value systems, his personality, his stated goals have on these participants. Perhaps along with the participants, the trainers should take the same measures themselves in order to establish the differences along the same dimensions.

Secondly, one should also ask the trainers to state clearly

what they regard as their goals. It is apparent in any research that the results of the training program are never completely determined by the stated goals of that program. Serendipity is a common phenomenon, and one wonders, therefore, why it would be useful to have these goals made explicit. The theoretical rationale for making one's intentions overt is that it would help a better integration of future programs and also help to test out the subjective convictions of the trainers of what in their program is useful or what is not. One may learn a little from the vast and conflicting research in the broad field of psychotherapy that not everything a therapist does is regarded as important by others around them or by those who are exposed to their treatment. If any clarification is to be sought in the field, such a program becomes imperative.

Before proceeding to talk about some of the things that we can learn from the data itself, we might briefly mention some of other shortcomings of the program as such. The shortcomings unfortunately detract from the importance of the findings as well as the degree to which one can generalize from these findings to other groups no matter how closely similar they might be. One of the major shortcomings of the program appears to be the choice of samples. Samples were chosen not according to statistical procedures which would maximize the generalization of results but according to judgements made by either the superiors or the trainers.

In the first two years, the participants were chosen on the recommendation of their superiors, a fact which would cloud the subsequent finding that these superiors then proceeded to find these

participants as generally being more effective than a group of controls who did not go through such an experience.

In the original proposal for this program, the following comments are made regarding the selection of the sample:

> A total of 150 principals and teachers will be recommended by their superintendents for participation in the training program. These will be selected by the Title III staff on the basis of their professional qualifications and willingness to participate.

No rationale for using this procedure of sample selection is given in the proposal.

In the third year, the participants were chosen on the basis of judgements made by the trainers as those who would potentially gain the most. These participants had been through either of the two prior workshops. What kinds of covert or overt biases were playing a part in this assessment cannot really be judged because we do not have the data. Such a selection procedure would further cast doubt on the broad generalizations one can make from these findings in view of the fact that during the second year the experimental group found the trainers, the principals, and superiors as being more powerful than the control group did (see p. 32 of Appendix B). In view of the general findings mentioned above, namely, the role of the trainer, this additional confirmation subjectively experienced by the participants would make it more explicit that the basis for the selection be made somewhat more covert. The trainers had the data of the massive assessment program conducted during the second year and results on various tests of how the participants had changed or not changed. None of these objective indices were chosen as a basis for selection. It was not possible to

follow this procedure due to budgetary restrictions as it would have meant the expenditure of more professional time than what was available within the budget limits.

It is feasible that the interviewers clinically tapped the same people who would have been chosen on the basis of these dimensions. However, it is also feasible that such factors as mutual liking and degree of rapport with the participants were the major determinants of this choice. If it were feasible, it would be interesting to see the characteristics of the participants chosen by the trainers.

The method of choosing control group in the third year is open to criticism that it is not a randomly selected sample. Again, this procedure of selection (p.8 ) was decided upon due to cost factors as it would have entailed a lot more expense to choose matched control subjects on a random basis.

We are not unaware of the practical problems involved in the selection of such a sample. The difficulty of getting people to come to a central place cannot possibly be underestimated. In this light, it may be stated that most of the participants had come in not on a voluntary basis necessarily but because of the recommendations made by the superior and the subtle coercive nature of such a recommendation as well as financial rewards that they got because of such a participation. It may be remembered that in this region (p.4 ) a financial reward of such a nature is a very great incentive and not something to be ignored.

One also must realize the handicaps that a team of outsiders, as at least some of the trainers were, encounters when dealing with the type of region that we are dealing with here (Cummins & Cummins, 1957).

These shortcomings should be kept in mind as things that one would ideally not like to have had occurred but were unavoidable within the confines of the sociological context perhaps.

It has been mantioned earlier (p.7 ) that due to budgetary restrictions it was not possible to select carefully all the interviewers nor was it possible to give them extensive training in the type of interview (p.79 ) used in this investigation. Four interviewers, three of whom had been trainers in the Human Relations workshops, interviewed the control and the experimental groups.

A careful examination of the interview data showed a range of differences within the interviews. Unfortunately, the data is not available for a in depth statistical analysis to assess the effect of the interviewers. It seems obvious, however, that the interviewers differed somewhat in the type of interviewing they did. For example, some interviewers stuck closely to a series of ten questions that had been prepared as a guide for interviews and asked more direct and structured questions whereas other interviewers used their ten questions as a guide in an open-ended type of interview. There were also differences in the degree to which the interviewer asked for dates that substantiated the statement made by the participants. For example, whereas one interviewer may get a response as, "I feel quite different this year and I feel that I have done things differently," another interviewer went on to find out examples of the types of differences the participant in question was talking about and found incidences of where this had occurred. Not all of the respondents covered the same areas of their life. There were instances where a respondent had not covered a certain

point and obviously was not specifically asked by the interviewer.

We do not know the effect of such variables as the halo effect. In other words we do not know how many of the students (p.97, Appendix B) knew that their teachers had or had not been to the human relations training workshops. We do not know how many were even aware of such a workshop and what psychological meaning it had for them. However in view of the predominantly negative picture painted by the students of their teachers, it is apparent that the halo effect if it was present was not really pronounced. As compared to the students the principals' ratings did not show many changes. The general tendency of the principals not to make any negative statements about those that they were rating, reduced the effectiveness of the scale being used.

It is interesting to see that when the control group was interviewed, during the last year of the project, they had no hesitation in talking about the problems they encountered in their life. Generally speaking, one gets the impression that the control group is more preoccupied with the external events and talks more about the changes that have occurred in their role structures, the obstacles they face and the frustration they experience in their daily routine. As compared to this the experimental group, in this case, has a greater preoccupation with their own reactions and their own effectiveness and do not concentrate as much on the external surroundings as do the control. Here again we may mention that they were being interviewed by trainers with whom they had by now clearly associated the "culture" of the Human Relations training workshop. In fact the two groups differ markedly in which they interpret the interview

questions and the connotations they place on the same words. What their responses would have been made had the assessment been done by outsiders who did not clearly belong to a part of the program, it is difficult to say. Interestingly enough the followup group of 19 did not pass on the forms for the principals' ratings to the same degree that the control group did. Whether this was a function of the greater preoccupation with one's own goal and a reduced preoccupation with one's surroundings or whether some other factors were at play, it is difficult to judge. Only nine out of the 18 who have been interviewed have a principal's rating on them as opposed to 12 out of the control.

It has already been repeatedly pointed out that budgetary considerations were responsible for the above mentioned shortcomings.

One may mention here that any program that is undertaken by any set of administrators anywhere, if it is to be used as a source of applicable information to other areas, must within it have an assessment program. The commitment to the assessment program, therefore, should be regarded as a major one and the nature of the assessment should not be allowed to suffer in preference of the size of the program itself. It is, of course, a matter of ultimate value judgement but it seems not so far fetched to say that a complex and comprehensive program without any assessment would not be worth much whereas a smaller program with a clear idea of where it stands, what it can perpetuate, and what it can curtail in the long range of a greater beneficial value not only to the administrators but also to the communities for which such programs are instituted.

Achievements

Let us now turn our attention towards recapitulating some of the achievements of this program which have been presented in Part I of this report and are contained in Appendix B. It is felt that the evaluation in spite of the shortcomings mentioned earlier does demonstrate clearly that educators do change significantly as a result of being exposed to human relations training program.

As is evidenced from Appendix B that in line with Martin's (1957) and Campbell and Dunnett's (1968) distinction of internal and external criteria for change, the present program attempted to study changes produced as a result of human relations training along both these dimensions. Several studies have attempted to study these changes (Bennis, Burk, Cutter, Herrington, & Hoffman, 1957; Burk & Bennis, 1961) but without the use of control groups. One pioneering aspect of the present evaluation that cannot be ignored is that it is possibly for the first time that a systematic attempt has been made to use matched control groups (in spite of budgetary limitations) to rule out any placebo effects. There are numerous studies available in the literature (Tohman, Zenger, & Wechsler, 1959; Massarih & Carlson, 1962) that have attempted to study the effects of human relations training without using control groups and this has resulted in the difficulty that no definite conclusions can be drawn about the findings.

It has been demonstrated that the educators became less authoritarian as a result of their exposition to human relations training (p. 7 , Appendix B). More specifically, this implies that they became less superstitious and more open minded. They became less rigid in their thinking and could handle their hostilities in a more realistic manner.

It seems that as a result of exposition to this program, the educators became more time competent, thereby implying that they were able to tie the past and the future to the present in a meaningful continuity. They developed greater faith in the future without rigid or overly realistic goals. It also seems that the educators' ability to use good judgement in the application of values also increased.

There is also some evidence that they became more sensitive to their own needs and feelings and their self-regard was enhanced in a marked fashion.

The educators started accepting themselves a little better in spite of their weaknesses. There was also an appreciable increase in the capacity for intimate contact with other human beings as a result of exposition to human relations training.

The present evaluation of the program has also demonstrated that as a result of exposition to human relations training, the educators saw themselves as good and forceful leaders; they said

that they liked responsibility and giving orders. Evidence is also presented to point out that the participants in the program became more straightforward and direct in their relationship to others and they reported to have become less rebellious and less distrustful of others. They also said that they were less timid and less self-punishing. They said that they were able to look at themselves realistically and criticize themselves if necessary.

It also seems that exposition to human relations training program enabled them to develop a realistic respect for authority and they became appreciative of the help of others. They viewed themselves as giving more freely of themselves and helping others. They also felt that they had become more considerate.

It also seems that the participants who were exposed to human relations training were viewed more positively by their principals and supervisors as compared to a matched control group.

There is also some evidence to point towards the fact that teachers who have been exposed to human relations training are viewed differently by the students as compared to teachers who have not had a chance to undergo such training. In this context, it is of interest to quote the most relevant portion of the findings contained in detail in Appendix B. On page 92 of this appendix it is mentioned:

> It is apparent that if a student has been interacting with a teacher who has been through the Human Relations Training, he is more likely to be involved with such activities as

learning, studying, preparing for the future, as feeling a sense of identity with the teacher whose punishing activities he perceived as being for his own good, as seeing the future to be good and as seeing his own actions to some extent being determined by himself than if he gets a teacher who has not had such training.

The data generated on the basis of feedback questionnaires and the present evaluation (pp.54-65) indicate that the participants perceived the programs very positively and felt that this would be of tremendous use to them in their back home situations. At this stage of the present research, there is no way to find out whether or not they will be able to put their intentions into actions. This is a function of the passage of time, and one has to wait to find out the long term effects of such a training.

In the interview analysis contained on pages 33-42 of Part I, it has been clearly demonstrated that experimental and control groups reacted differently and do perceive the changes within themselves as being different. The great majority of the experimental group members felt that the greatest amount of change within them had come due to the human relations training. As opposed to this, the controls mentioned several events in the course of their lives not related to human relations training in the same period of time which had led up to the greatest amount of change in them.

There is also evidence that the experimental group visited the communities more and took part more in the local politics as compared to the control group. They had started introducing human relations training in their churches and they had better and closer relationships with the local county officials than they used to.

There is evidence to show that members of the experimental group became more active in their relationship with the PTA and tried to talk with the students' parents more and they tried to mix with the people more and point out how they felt. This was not the case among the members of the control group.

It seems that as a result of the exposition to human relations training, the educators in the experimental group reported they had become more accepting and reported solving more problems in their jobs and communities than they used to as compared to the control group.

It also seems that as a result of exposition to human relations training, the educators started initiating new activities in their school systems and with their students. They seemed to be interacting more with their students as compared to the control group members. It is also interesting to note that they let their students take part in planning and trying to find out what the students' interests were, and this was not done by persons who had not been exposed to human relations training program.

It also seems that the human relations training helped the

educators to communicate better with their superiors and their peers. They felt freer in expressing their opinions, they felt less inferior, and felt more confident in their relationships, and some of them felt closer to their principals.

Summary

The present evaluation has clearly demonstrated very significant changes on the basis of the external and internal criteria for the persons who participated in the human relations training program. It seems that not only one's personality changes significantly as a result of exposition to such a training program, but it seems that one is able to function better at his job and in his community. One seems to have more satisfying life in his environment. It is safe to say that the human relations program enables one to become a better teacher.

It would be interesting to make a few general comments about the role and status of a teacher in our society vis-a-vis human relations training.

Generally speaking, across the nation the role of the teacher has not been one of either very great sociological power or one accorded the respect and status that the teacher has enjoyed in previous centuries and in other places. The teacher has had to bear the brunt of society's problems and has had to share in the blames more than its rewards. One may mention here that the

sociological nature of the area in question has generally perhaps been kinder to its teachers than other parts of the country have been. The teacher in these areas is not at the bottom of the totem pole. Economically, even though he must of necessity depend on supplementary income in order to make both ends meet, he is not too far down the socioeconomic ladder as his colleagues in major suburban sections are. Because of the general lower educational value of the populus at large in the area, he is also bound to be awarded greater status and respect than the general school teacher gets in other parts.

With this in mind, we may then reflect that any investment in the teacher becomes an investment for the future. How then should this investment be best utilized? One may wonder whether the technical skills given to these teachers should be enhanced. Whether it would be better for them to be sent back to school and their academic skills strengthened. In view of the Peter Principle, one would suspect that too high powered a training in this area would pretty soon make them incompetent for the job they are to do. In this sense, the more relevant material especially in view of the large social unrest in the country as such would seem to be the improvement of the social skills of the teacher, particularly his relationships with his students and with those that he works with within the social structure. This would be far more relevant an area to concentrate on than sending him to graduate school where he

may have a better understanding of Einstein's theory but not be able to understand the students he deals with. The general discontent across the country and the so-called rebellion of the young would further emphasize the need for the teacher to become a greater social participant than a greater academician, though, of course, we must recognize that such divisions are not mutually exclusive. If then we are to concentrate on the teacher, what kind of values would one hope to instill and what kinds of methods would one use most profitably and at what stages? The training sessions aimed at enhancing the teachers' human relations skills. The assessment programs give some indication of how and where these changes occur most. Human relations training seems to be a very powerful tool for inculcating these skills in an educator.

The design for Tennessee Assessment and Evaluation of Title III, ESEA (3) while discussing the goals of Title III funds states, "Title III funds can provide the means for exploring new ideas, new ways, and demonstrating different means of attacking identified educational problems. Title III should be a vehicle for change by providing funds for coping with problem areas. There is an implied obligation in the long range strategy of the Title III to coordinate programs funded from this source and the funds from other sources, with an expectation that other sources can and will be available for continuing those programs that hold the greatest promise."

In light of these stated goals of Title III funding, it can safely be said that the present program so far as its human relations training component is concerned certainly represents a pioneering effort in the exploration of new ideas and new ways of making the teachers more effective on their jobs. It has demonstrated an innovative and a relatively sure means of attacking this very difficult problem of teacher improvement.

Because of the pioneering nature of this evaluation, the writer has been approached by several publishers about writing a book on the implications and findings of this program. Several scientific papers have been presented at professional meetings in the United States and abroad about the exciting results of this program. A partial list of these is enclosed on page 106 of Appendix A.

As has been hinted earlier, it is difficult to say whether or not this program would be continued by all the participants from the various school systems in their own environment, but the data suggest that they would like to do so in case they could obtain adequate funding for such operations. There is also some evidence to indicate that some of the participants are already using techniques they learned during this training to teach their classes and to relate to peers and superiors and are also trying to make use of their new knowledge in the communities and churches.

It is felt that a long range follow-up of the participants is very necessary to find out as to what happens eventually in the schools and communities as a result of exposition to human relations training.

In case such a program were to be recycled in the future, suitable steps should be taken to overcome the shortcomings mentioned on pages 38-40. If one can get enough funds and the resultant professionally trained manpower, it should not be at all difficult to overcome the shortcomings that were described. From an administrative point of view, it would seem very necessary that the evaluator consult with the administrators before a budget request is made and that adequate monies should be made available to conduct a more comprehensive evaluation.

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# APPENDIX A

FEEDBACK
QUESTIONNAIRE

We are very interested in learning about your reactions to the three weeks workshop. We will greatly appreciate your honest and frank answers to the following questions. We do not want you to give your name.

1. Did the workshop meet your expectation? Yes_____ No_____

   a) If yes, in what ways?_____
   _____
   _____

   b) If no, why not?_____
   _____
   _____

2. Please check one of the following:

   a) I feel that this experience has made me more competent to do in-service training in the back home situation._____

   b) I feel that this experience has made me less competent to do in-service training in the back home situation._____

   c) My competency for in-service training has remained the same._____

3. Please check one of the following: As a result of this experience:

   a) I plan to use innovative techniques in my classroom._____

   b) I feel that none of these techniques are applicable in the classroom._____

   c) I do not plan to use any of these techniques in my classroom._____

4. Do you feel that as a result of this experience:

   a) Your skills in problem solving have improved._____

   b) Your skills in problem solving have not improved._____

   c) Your skills in problem solving are the same._____

5. How meaningful was the RVPS model to you as a learning experience?

   a) Very meaningful _____

   b) Meaningful _____

   c) Somewhat meaningful _____

   d) Meaningless _____

6. Do you feel that the RVPS model should be made available to all teachers in their in-service training program? Yes_____ No_____ Am not sure_____

7. Briefly describe how you could adapt three aspects of the Life Plan Program to back home situations. _____

_____

_____

8. Would you recommend the Life Plan Program to another group of teachers? Yes_____ No_____

9. How useful did you find the talk of Dr. Busby?

   a) Very useful _____

   b) Useful _____

   c) Slightly useful _____

   d) Not useful _____

10. How would you rate the degree of success you had in making use of the learning opportunities provided in the triad (three concentric circles) T groups?

   a) A great deal _____

   b) Some _____

   c) Very little _____

11. How could your learning opportunities in the Triad T group be improved?

_____

_____

12. How would you rate your involvement and commitment to your back home plans from this learning experience?

   a) A great deal _____

   b) Some _____

   c) Very little _____

13.a What experience in the "problem solving for back home" helped you the most?

_____

_____

13.b What experience in the "problem solving for back home" helped you the least?

_____

_____

## LIFE PLAN PROGRAM OUTLINE

1. Life Line
2. Discuss
3. Ten Descriptions of Self, "Who Am I?"
4. Priority Arrangement
5. Discuss
6. Obit and Epitaph
7. Discuss
8. Who Would I Like to Be?
9. A Day or Two In Your Life Ten Years From Now.
10. Eight (8) Categories -- listed below
11. Formulate Projects To Get To Do Things Well You Want To Do Well

### CATEGORIES

1. Peak Experiences (a list of things that matter to you)
2. Things I Do Well
3. Things I Do Poorly
4. Things I Would Like To Stop Doing
5. Things I Would Like To Learn To Do Well
6. Peak Experiences I Would Like To Have
7. Values To Be Realized
8. Things I Would Like To Start Doing Now

QUESTIONS USED AS GUIDELINES FOR INTERVIEWS

NAME: _____

1. How do you feel you have functioned as a teacher in this school year so far as compared to previous years?

2. Have you done anything differently as a teacher in this school year as compared to other years?

3. Do you feel that you have related differently to other teachers in this school year as compared to previous years?

4. Have your activities as related to other teachers been any different during this school year as compared to previous years?

5. Do you feel that you have related differently to your superiors (e.g., principal) during this school year as compared to previous years?

6. Do you think that your role has been different during this school year in school activities that involve you and your superiors (e.g., principal) as compared to previous school years?

7. Do you feel that you have related differently to students during this school year as compared to previous years?

8. Have your activities as related to students been any different during this school year as compared to previous years?

9. Do you feel that you have related differently to your community (e.g., PTA groups, etc.) during this school year as compared to previous years?

10. Have your activities as related to your community (e.g., PTA groups, etc.) been any different during this school year as compared to previous years?

QUESTIONNAIRE FOR SUPERIORS' RATINGS

NAME: _____

1. In your opinion has the above named teacher been functioning differently in any way during this school year as compared to previous years? If so, in what ways? Please mention specific activities.

2. Has the teacher initiated any activities within the school system? Please give details.

3. Has the teacher joined in and supported any new activities that have been started by others in the school? Please give details.

4. How does this teacher relate to other teachers? Please give details.

5. How does the teacher get along with the students? Please give some examples if possible.

6. Is there anything else you can tell us about this teacher which will help us understand his role?

DEC 2 1 1970

# AN EVALUATION OF THE HUMAN RELATIONS TRAINING PROGRAM
1968-1969

## Appendix B

SP004461

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June 1969

J. L. Khanna

Introduction

This is a report on the evaluation of the sensitivity training program.

This sensivity training program primarily consisted of using Human Relations Training techniques with the educators who participated in the program. More specifically, the participants took part in a Human Relations Training Laboratory for two weeks in the Summer of 1968 and subsequently were exposed to 14 Saturday meetings held at predetermined time intervals till the end of the school year in 1969.

An effort was made to assess any changes that might have occurred among the participants as a result of this experience.

This report will describe:

a. The nature of the sample;
b. Design and procedure for evaluation;[1]
c. The measures used and the results obtained.

Relevant statistical tables are included in the report, for those readers who might be interested in these. Detailed statistical analyses are available from the writer on request.

In the end, some of the main findings on the basis of this evaluation are summarized. Implications of these conclusions for teacher training and education are discussed.

---

1. Copies of instruments used in this investigation have already been furnished with the preliminary report of this evaluation; hence, they are not incorporated in this report.

## DESCRIPTION OF THE SAMPLE

Before we describe the sample in a detailed manner, it might be interesting to mention some characteristics of the region from which this sample was selected. This region which is called Upper Cumberland Region in Tennessee comprises one-eighth of the total land area in Tennessee. This area lost nearly ten per cent of its population between 1950 and 1960, but since 1960 the trend has reversed and the region is now gaining in population due primarily to industrial, federal funds and general economic stimulation. But even as late as 1965, one half of the households had an effective buying power of less than $2500.00. For every $100.00 that the average person in the United States had to spend, the average Upper Cumberland resident had only $49.00.

The average educational level for adults twenty-five years of age and over in the Upper Cumberland area is mid-seventh grade for men and approximately eighth grade for women. If each person with less than five years of schooling is classified as a functional illiterate, almost one-fourth of the adult population would fall into this classification.

Some students must ride a school bus three hours or more daily to attend school that does not provide the type of curriculum needed to prepare them to live in the last third of the twentieth century. Of the twenty-five high schools in the Upper Cumberland Region, eighteen have enrollments of less than 500 students. Thirteen of these twenty-five schools offer thirty courses or fewer. Five of the school systems have enrollments of less than 2000 students. Approximately one hundred schools have a four-teacher capacity or less. One-fourth of the teachers have less than a bachelor's degree. Art, music, drama, guidance and effective programs in vocational education are almost non-existent. The number of persons per hospital bed, the number of persons for each physician and the number of persons for each dentist in the area is more than twice as large as the same ratio for the State of Tennessee.

Stewart (15) has raised a basic question and I quote him, "How do you improve education in such a region? We could all give many answers but one main ingredient which has to be considered is the classroom teacher. We could build fine buildings, provide elaborate equipment, increase expenditures and do just about anything else we wish, but the only thing that really makes the difference is the teacher. Our salaries are too low. We know that by and large we are stuck with the teachers we have and they with us." So, the argument was made that we must improve the teachers we have.

The sample for the present program was selected from this region and consisted of one hundred and fifty teachers. Their teaching

experience ranged from elementary school to high school, to principals and educational administrators.

This sample of 150 educators was selected on the basis of recommendations received by the various school system superintendents and principals.

These educators numbering 150 who participated in the Human Relations Training Laboratory and the subsequent Saturday meetings (mentioned earlier) comprised what is called in this evaluation the Experimental Group.

To get a comparable group, a Control Group of 50 educators was chosen who were similar in most respects to the experimental group. Educators comprising the control group were not exposed to any Human Relations Training. Some of the sample characteristics of the experimental and the control group are described below.

The mean age of the control group was 41.3 years and the mean age of the experimental group was 42.4 years. There were 32 per cent males in the control group and 34 per cent males in the experimental group. The mean years in number of profession for the control group was 14. The mean years in number of profession for the experimental group was 14.8. The mean income in the control group was $590.00 per month, and the mean income in the experimental group was $560.00 per month. The number of dependents in both the groups was 1.50. There is no difference in the size of the cities from which the control and the experimental groups came.

A statistical analysis of these characteristics of the experimental and control groups indicated that these two groups did not differ from each other.

## DESIGN AND PROCEDURE

Subjects comprising the experimental group were administered the tests (described below) three times. Once at the beginning of the training program; secondly, at the end of the two-week Human Relations Training Laboratory and thirdly, in January and February of 1969 which represented a lapse of approximately four to five months since their exposition to the Human Relations Training Laboratory. As compared to these three administrations, the control group was given the tests twice, once at a time which coincided with the first testing of the experimental group and then at a time which coincided with the third testing of the experimental group. Due to budgetary limitations, it was not possible to test the control group the same number of times as the experimental group.

Basic demographic data, e.g. age, sex, marital status, etc., was collected on all the participants of the control and the experimental groups.

Changes in the experimental and control groups were assessed in terms of internal criteria and external criteria. In addition, a feedback questionnaire was administered to the experimental group.

Internal criteria changes, for the purposes of this evaluation, pertain to those changes that occur within a person. These were assessed by the use of the following measures:

1. The Authoritarianism Scale (F Scale) (1 ).
2. The Personal Orientation Inventory (12).
3. Semantic Differential (10 ).
4. Leary's Interpersonal Check List ( 7 ).
5. The Motivation Analysis Test ("MAT") (3 ).

Each of these instruments is described later.

The external criteria changes imply those changes that take place in the external environment of an individual. For example, the effect that a teacher might have on his students as a result of his exposition to Human Relations Training or the effect that an educator might have on the community around him could be classified as external criteria changes. For the purpose of this investigation, the following instruments were used to assess external criteria changes:

1. Ratings by principals (11 ).
2. The use of the Michigan Picture Test (2) to assess students' perceptions of the teachers.
3. The use of the Leary Interpersonal Check List ( 7) to assess students' perceptions of the teachers and themselves.

These techniques will be described in detail in the next section of this report.

A feedback questionnaire was administered to the experimental group at the end of the two week Human Relations Training Laboratory. Results obtained from this questionnaire are reported later.

## DESCRIPTION OF MEASURES AND RESULTS OBTAINED

## INTERNAL CRITERIA

1. Authoritarianism

Authoritarianism was measured by the administration of the F Scale (1), commonly called the Authoritarianism Scale.

According to Frenkel Brunswik (1), high authoritarianism as measured by F Scale score consists of:

"a. Conventionalism: Adherence to conventional middle class values.
b. Authoritarian submission: Submissive uncritical attitude towards idealized moral authorities of the in-group.
c. Authoritarian aggression: Tendency to be on the lookout for and to condemn, reject and punish people who violate conventional values.
d. Anti-intraception: Opposition to subjective, imaginative and the tenderminded.
e. Superstition and stereotype: Beliefs in the Mystical determinants of individuals' fate, the disposition to think in rigid categories.
f. Power and toughness: Preoccupation with dominance-submission, strong-weak, leader-follow or dimension; identification with power figures; overemphasis upon the conventional as attributes of the ego; exaggerated assertion of strength and toughness.
g. Destructiveness and cynicism: Generalized hostility, vilification of the human.
h. Projectivity: Disposition to believe that wild and dangerous things go on in the world.
i. Sex: A concern with sexual goings on" (pp. 255-256).

The mean F Scale score was 116 for the control group and 112 for the experimental group for the first administration of the F Scale. The T ratio between these two means was 1.084 which is not significant at the 5% level. Changes in the F Scale scores for the first and third testings of the experimental and control group were compared.

For the control group the mean change in F Scale score for the two administrations was +.167. T-test of significance for paired samples (for one-sided test) was computed (5). The value of t was 0.567 which is not significant. For the experimental group the main change in F score for the first and third administrations was -5.22. The t ratio was -3.179 which is significant at .001 level. This data would suggest that the experimental group changed more significantly so far as authoritarianism is concerned as compared to the control group. Implications of these findings are obvious in light of the above definitions of authoritarianism.

It seems that the educators became less authoritarian as a result of their exposition to Human Relations Training. More specifically, it can be said that they became less superstitious and more open-minded. They became less rigid in their thinking and could handle their hostilities in a more realistic manner.

Regression equations (19) were computed to find out the importance of age, sex, marital status, educational level, income, etc., in the F Scale changes.

Level of income and number of years in profession seem important in the F Scale changes. It seems that the more the number of years in profession, the less a person changes in terms of authoritarianism. Also, the higher an individual's income, the more he changed in terms of authoritarianism.

It is interesting to note that at least in this study none of the other demographic variables seemed to play a significant role in F Scale changes. Also, the F Scale scores for the experimental group between the first and the second testing did not change significantly.

2. Personal Orientation Inventory (POI)

Shostrom's Personal Orientation Inventory (12) was used to assess some of the personality changes as a result of the Human Relations Training Program. In recent years Maslow (8) has developed the idea of the self-actualizing person--a person who is more fully functioning and lives a more enriched life than does the average person. Such an individual is seen as developing and utilizing all of his unique capabilities, or potentialities, free of the inhibitions and emotional turmoil of those less self-actualized. The Personal Orientation Inventory is an instrument created by Shostrom (12) to measure self-actualization. It consists of a 150 two-choice comparative value and behavior judgements.

The POI has a number of subscales. These scales are briefly described on pages 12-13.

Table I (page 14) gives the means and the standard deviations for the POI for the pre-test of the experimental and control groups. It is clear from this table that the experimental and control groups are not different from each other.

Table 2 (page 15) gives the POI scores for the experimental group for the pre-test, first post-test and the second post-test.

Table 3 (page 16.) gives the POI scores for the pre-test and the second post-test of the control group. T ratios were computed to study the difference between these means, and no difference was found in the means except in spontaneity and self-acceptance subscales. Means for these are different at the 5% level of confidence.

Newman-Keuls test (19) of differences among means (which uses studentized range statistics [19]) was used in the experimental group for the pre-test, first post-test and second post-test. The results are summarized in a simple manner in Table 4 on pages 17. A graph on page 18 depicts the mean changes in the experimental group.

The following conclusions can be drawn from this data:

a. It seems that the educators exposed to Human Relations Training became more time competent. This implies that they were able to tie the past and the future to the present in a meaningful continuity. They developed greater faith in the future without rigid or overly idealistic goals.

This change in time competence seems to have occurred between the pre-test and the first post-test as is evident from Table 2.

b. The change in existentiality was statistically significant in the experimental group and occurred again between the pre-test and the first post-test. This change implies an increase in one's ability to use good judgement in the application of values.

c. There was a change at the 1% significance level in feeling reactivity. This implies sensitivity to one's own needs and feelings. Again, this change occurred between the pre-test and the first post-test.

d. The experimental group's self-regard was enhanced in a marked fashion. This is indicated by the significant difference at the 1% level of confidence between the first and second testing.

e. There is evidence (at the 5% level of confidence) that the self-acceptance was enhanced in the experimental group. Self-acceptance implies acceptance of one's self in spite of one's weaknesses or deficiencies. It appeared that the educators were more able to accept their own weaknesses and look at them realistically as the result of Human Relations Training. Interestingly enough, this change occurred between the second post-test and the third post-test as compared to the changes mentioned above which primarily took place between the pre-test and the first post-test.

f. The data indicates that there was a statistically significant change between the pre-test and the first post-test for "awareness" as measured by the POI. This can be interpreted by saying that the ability to relate to all objects of life meaningfully increased as a result of exposition to Human Relations Training.

g. There was an appreciable increase in the capacity for intimate contact with other human beings as a result of exposition to Human Relations Training. Again, this increase seemed to have occurred between the pre-test and the first post-test. It seems that the members of the experimental group were able to develop a more meaningful relationship with other human beings as compared to the control group.

We have noticed above that as a result of exposition to the Human Relations Training, the POI data indicates that the experimental group became more time competent; gained in existentiality; their feeling reactivity increased; their self-regard and self-acceptance increased; they became more aware of themselves; and they developed a capacity for more intimate contact with other human beings.

It is interesting to note that most of the changes in the POI data seemed to have occurred between the pre-test and the first post-test, and there was not much change between the first post-test and the second post-test. This would indicate that so far as the POI is concerned, probably the participants got a lot out of the two weeks intensive Human Relations Training Program and not so much out of the subsequent Saturday sessions.

The effects of Human Relations Training in terms of years in profession, sex, age and church affiliation for the POI data were studied by computing 82

two by two analyses of variances. Tables 5-12 on pages 19-21 give the significant findings. The insignificant results obtained by this analysis are not included in this report.

Table 5 page 19 gives the effects of years of profession as a result of Human Relations Training on the O subscale of the POI. It appears that persons who have spent between ten and 29 years in profession are more oriented to others as compared to persons who have spent less than nine years in profession and those who have spent more than thirty years in profession. This difference is significant at 5% level.

Similarly it seems from Table 6 that as a result of Human Relations Training persons who are between 20 and 29 years of age become more existentially oriented. This age group seems to differ from all the other age groups. Again the difference is significant at 5% level.

On the basis of this sample it seems that males become more existentially oriented after Human Relations Training than females. This difference is significant at .01 level (Table 7 page 19).

The mean differences in Table 8 page 20 are significant at .01 level. This can be interpreted by saying that Baptists and Methodists become more existentially oriented than members of Church of Christ.

Then from Table 9 page 20 we notice that Baptists and Methodists become more spontaneous than persons who belong to Church of Christ and again this difference seems to be significant at .05 level.

So far as spontaneity is concerned it appears that Methodists and Baptists do not differ from each other. Baptists do not differ from Church of Christ.

Table 10 describes the changes in A (acceptance of aggression) subscale of the POI in terms of church affiliation. Again we find that persons belonging to Baptist and Methodist Church seem to accept aggression more as a result of human relations training as compared to persons belonging to the Church of Christ. This difference is significant at 5% level of confidence.

From Table 11 page 21 it appears that as a result of exposition to human relations training males are able to accept aggression better than females and this difference is again significant at 5% level.

Table 12 page 21 describes the effect on self-acceptance and as a result of this training. Again we find that persons between the ages of twenty and thirty stand apart from the rest of the groups listed in the Table. It seems that persons in this age range were able to accept themselves

better as a result of human relations training as compared to other age ranges. This difference is significant at 5% level of confidence. It is also interesting to note that there seems to be no significant difference between persons who are between 20 and 29 years old and 40 and 49 years old.

The rest of the analysis of variances provided insignificant data. It seems that so far as POI changes are concerned it does not make any difference if the group to which a person belongs is a typical T group (i.e. where strangers are brought together) or is a group which is constituted of persons who know each other before coming into the group.

| Number of Items | Scale Number | Symbol | Description |
|---|---|---|---|
| I. Ratio Scores | | | |
| 23 | 1/2 | $T_I/T_C$ | TIME RATIO<br>Time Incompetence/<br>Time Competence -<br>measures degree to which one is "present" oriented |
| 127 | 3/4 | O/I | SUPPORT RATIO<br>Other/Inner -measures whether reactivity orientation is basically toward others or self |
| II. Sub-Scales | | | |
| 26 | 5 | SAV | SELF-ACTUALIZING VALUE<br>Measures affirmation of a primary value of self-actualizing people |
| 32 | 6 | Ex | EXISTENTIALITY<br>Measures ability to situationally or existentially react without rigid adherence to principles |
| 23 | 7 | Fr | FEELING REACTIVITY<br>Measures sensitivity of responsiveness to one's own needs and feelings |
| 18 | 8 | S | SPONTANEITY<br>Measures freedom to react spontaneously or to be oneself |
| 16 | 9 | Sr | SELF REGARD<br>Measures affirmation of self because of worth or strength |

| Number of Items | Scale Number | Symbol | Description |
|---|---|---|---|
| 26 | 10 | Sa | SELF ACCEPTANCE<br>Measures affirmation or acceptance of self in spite of weaknesses or deficiencies |
| 16 | 11 | Nc | NATURE OF MAN<br>Measures degree of the constructive view of the nature of man, masculinity, femininity |
| 9 | 12 | Sy | SYNERGY<br>Measures ability to be synergistic, to transcend dichotomies |
| 25 | 13 | A | ACCEPTANCE OF AGGRESSION<br>Measures ability to accept one's natural aggressiveness as opposed to defensiveness, denial, and repression of aggression |
| 28 | 14 | C | CAPACITY FOR INTIMATE CONTACT<br>Measures ability to develop contactful intimate relationships with other human beings, unencumbered by expectations and obligations |

TABLE I: Means and Standard Deviations of the Experimental and Control Group on the Basis of Pretest

PRETEST

| | POI Item | | Experimental | Control | p |
|---|---|---|---|---|---|
| 1. | TI | M | 7.03 | 7.06 | N.S. |
| | | S | 2.96 | 2.57 | |
| 2. | TC | M | 15.84 | 15.76 | N.S. |
| | | S | 2.95 | 2.66 | |
| 3. | O | M | 47.89 | 48.02 | N.S. |
| | | S | 9.63 | 8.92 | |
| 4. | I | M | 76.68 | 77.48 | N.S. |
| | | S | 10.23 | 8.67 | |
| 5. | SAV | M | 19.34 | 19.54 | N.S. |
| | | S | 2.59 | 2.35 | |
| 6. | EX | M | 17.23 | 16.74 | N.S. |
| | | S | 3.97 | 3.76 | |
| 7. | FR | M | 13.80 | 13.32 | N.S. |
| | | S | 2.71 | 2.70 | |
| 8. | S | M | 10.62 | 10.80 | N.S. |
| | | S | 2.79 | 2.29 | |
| 9. | SR | M | 11.68 | 12.06 | N.S. |
| | | S | 2.30 | 2.60 | |
| 10. | SA | M | 15.00 | 14.82 | N.S. |
| | | S | 2.93 | 2.61 | |
| 11. | NC | M | 11.62 | 11.80 | N.S. |
| | | S | 1.87 | 2.09 | |
| 12. | SY | M | 6.70 | 6.96 | N.S. |
| | | S | 1.31 | 1.23 | |
| 13. | A | M | 14.70 | 14.52 | N.S. |
| | | S | 3.28 | 3.24 | |
| 14. | C | M | 16.06 | 16.46 | N.S. |
| | | S | 3.10 | 2.71 | |

M represents the Mean; S represents the Standard Deviation.
N for Experimental Group = 108; N for Control Group = 50.
Significance was computed on the basis of t-tests. Not significant implies a t-value which was not significant at 5% level.

TABLE 2: POI - Means and Standard Deviations for the Experimental Group for the Pretest, 1st Post-test and the 2nd Post-test

| | PRETEST | | POST-TEST 1 | | POST-TEST 2 |
|---|---|---|---|---|---|
| | POI | Items | | | |
| 1. | TI | M | 7.03 | 6.67 | 6.17 |
| | | S | 2.96 | 3.50 | 2.62 |
| 2. | TC | M | 15.84 | 16.43 | 16.67 |
| | | S | 2.95 | 3.16 | 2.73 |
| 3. | O | M | 47.89 | 42.40 | 43.10 |
| | | S | 9.63 | 9.64 | 10.93 |
| 4. | I | M | 76.68 | 82.90 | 83.19 |
| | | S | 10.23 | 10.38 | 11.08 |
| 5. | SAV | M | 19.34 | 19.45 | 19.83 |
| | | S | 2.59 | 2.74 | 2.42 |
| 6. | EX | M | 17.23 | 19.89 | 20.18 |
| | | S | 3.97 | 4.38 | 4.47 |
| 7. | FR | M | 13.80 | 15.17 | 14.87 |
| | | S | 2.71 | 2.80 | 2.70 |
| 8. | S | M | 10.62 | 11.51 | 11.48 |
| | | S | 2.79 | 2.81 | 2.61 |
| 9. | SR | M | 11.68 | 11.58 | 12.09 |
| | | S | 2.30 | 2.54 | 2.49 |
| 10. | SA | M | 15.00 | 16.66 | 16.69 |
| | | S | 2.93 | 3.01 | 3.20 |
| 11. | NC | M | 11.62 | 12.04 | 11.99 |
| | | S | 1.87 | 1.75 | 1.78 |
| 12. | SY | M | 6.70 | 6.94 | 6.99 |
| | | S | 1.31 | 1.20 | 1.23 |
| 13. | A | M | 14.70 | 15.95 | 16.09 |
| | | S | 3.28 | 3.10 | 3.06 |
| 14. | C | M | 16.06 | 18.12 | 18.00 |
| | | S | 3.10 | 3.46 | 3.35 |

N = 108

M represents the Mean
S represents the Standard Deviation

TABLE 3: Means and Standard Deviations for the POI Scores for the Pretest and the 2nd Post-Test of the Control Group

| | PRETEST | | | POST-TEST 2 | | |
|---|---|---|---|---|---|---|
| | POI | ITEM | | POI | ITEM | |
| 1. | TI | M | 7.06 | TI | M | 6.57 |
| | | S | 2.57 | | S | 2.84 |
| 2. | TC | M | 15.76 | TC | M | 16.26 |
| | | S | 2.66 | | S | 2.80 |
| 3. | O | M | 48.02 | O | M | 46.62 |
| | | S | 8.92 | | S | 10.21 |
| 4. | I | M | 77.48 | I | M | 78.68 |
| | | S | 8.67 | | S | 9.69 |
| 5. | SAV | M | 19.54 | SAV | M | 19.14 |
| | | S | 2.35 | | S | 2.65 |
| 6. | EX | M | 16.74 | EX | M | 16.96 |
| | | S | 3.76 | | S | 4.06 |
| 7. | FR | M | 13.32 | FR | M | 13.48 |
| | | S | 2.70 | | S | 2.83 |
| 8. | S | M | 10.80 | S | M | 10.16 |
| | | S | 2.29 | | S | 2.34 |
| 9. | SR | M | 12.06 | SR | M | 12.08 |
| | | S | 2.60 | | S | 2.40 |
| 10. | SA | M | 14.82 | SA | M | 15.72 |
| | | S | | | S | |
| 11. | NC | M | 11.80 | NC | M | 11.32 |
| | | S | 2.09 | | S | 2.08 |
| 12. | SY | M | 6.96 | SY | M | 6.88 |
| | | S | 1.23 | | S | 1.26 |
| 13. | A | M | 14.52 | A | M | 15.34 |
| | | S | 3.24 | | S | 2.95 |
| 14. | C | M | 16.46 | C | M | 16.90 |
| | | S | 2.71 | | S | 3.22 |

M represents the Mean
S represents the Standard Deviation

TABLE 4

POI

Changes in the experimental group for the Pretest, 1st Post-test and 2nd Post-test on the basis of the Newman-Keuls Test of differences among means

| | Item | p(using F distribution) | Means for the three testings* |
|---|---|---|---|
| 1. | TI | .01 | 3 2 1 |
| | | .05 | 3 2 1 |
| 2. | Tc | .01 | 1 2 3 |
| | | .05 | 1 2 3 |
| 3. | O | .01 | 2 3 1 |
| 4. | I | .01 | 1 2 3 |
| 5. | Sav | N.S. | |
| 6. | Ex | .01 | 1 2 3 |
| 7. | Fr | .01 | 1 3 2 |
| 8. | S | .01 | 1 3 2 |
| 9. | Sr | .05 | 2 1 3 |
| 10. | Sa | .01 | 1 2 3 |
| 11. | Nc | N.S. | |
| 12. | Sy | N.S. | |
| 13. | A | .01 | 1 2 3 |
| 14. | C | .01 | 1 3 2 |

*1 = Pretest
2 = Post-test 1
3 = Post-test 2

Note: A line joining two numbers implies that the means were not different.

# PROFILE SHEET FOR THE PERSONAL ORIENTATION INVENTORY

NAME EXPERIMENTAL-GROUP - MEANS DATE TESTED PRETEST - BLUE 1ST POST TEST - GREEN 2ND POST TEST - RED

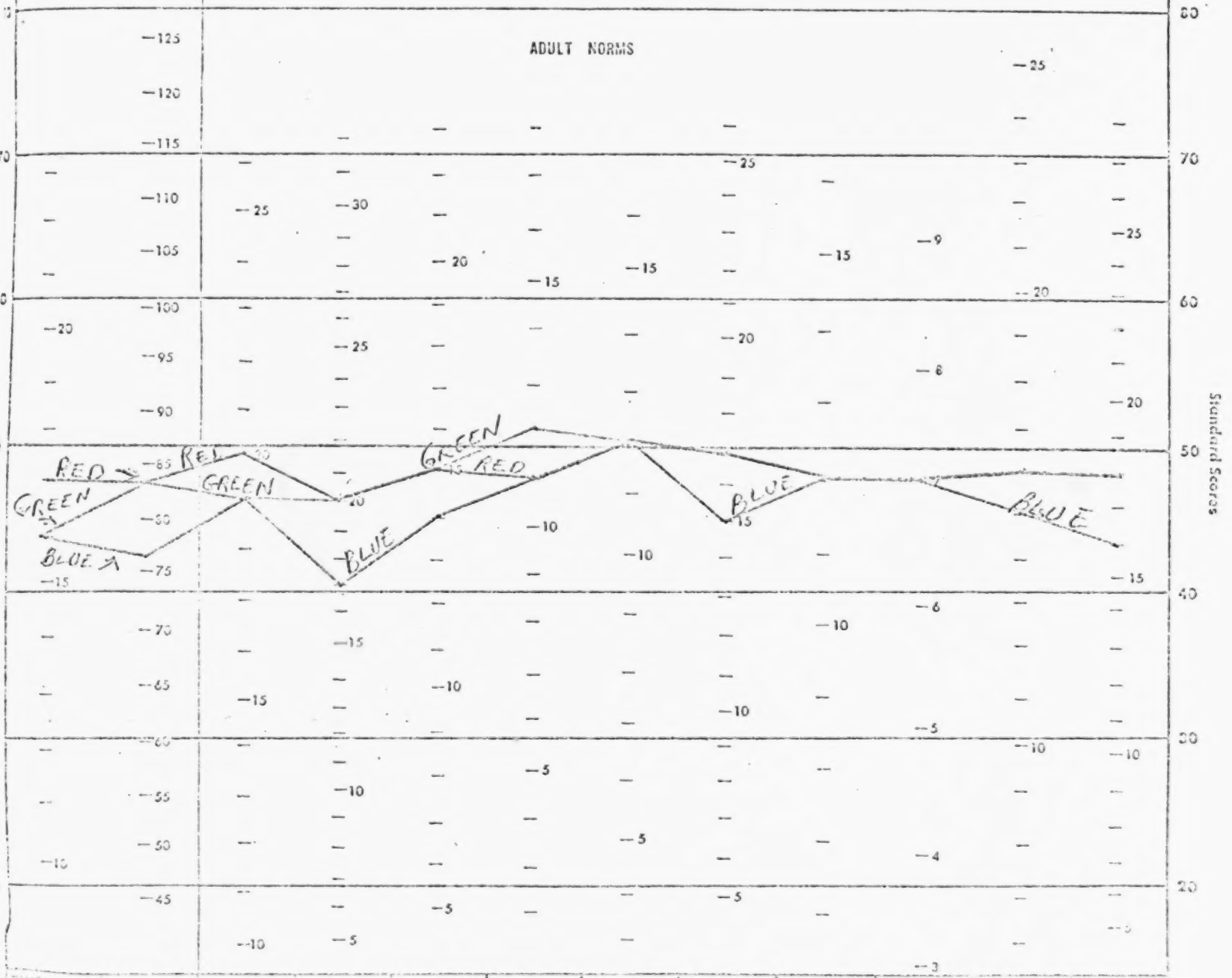
AGE _____ SEX _____

OCCUPATION _____

I $T_I - T_C$ (Time) Ratio:
Self-Actualizing Average: $T_I : T_C = 1:8$
Your Ratio: $T_I : T_C = 1:$ __

II O - I (Support) Ratio:
Self-Actualizing Average: O:I = 1:3
Your Ratio: O:I = 1: __

| | | VALUING | | FEELING | | SELF-PERCEPTION | | SYNERGISTIC AWARENESS | | INTERPERSONAL SENSITIVITY | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME COMPETENT Lives in the present | INNER-DIRECTED Independent, self-supportive | SELF-ACTUALIZING VALUE Holds values of self-actualizing people | EXISTENTIALITY Flexible in application of values | FEELING REACTIVITY Sensitive to own needs and feelings | SPONTANEITY Freely expresses feelings behaviorally | SELF-REGARD Has high self-worth | SELF-ACCEPTANCE Accepting of self in spite of weaknesses | NATURE OF MAN, CONSTRUCTIVE Sees man as essentially good | SYNERGY Sees opposites of life as meaningfully related | ACCEPTANCE OF AGGRESSION Accepts feelings of anger or aggression | CAPACITY FOR INTIMATE CONTACT Has warm interpersonal relationships |
| $T_C$ | I | SAV | Ex | Fr | S | Sr | Sa | Nc | Sy | A | C |




| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME INCOMPETENT Lives in the past or future | OTHER-DIRECTED Dependent, approval-prone, fearful of others' views | Rejects values of self-actualizing people | Rigid in application of values | Insensitive to own needs and feelings | Fearful of expressing feelings behaviorally | Has low self-worth | Unable to accept self with weaknesses | Sees man as essentially evil | Sees opposites of life as antagonistic | Fearful of anger or aggression | Has difficulty with warm interpersonal relations |

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POI

TABLE 5

THE EFFECT OF YEARS IN PROFESSION ON THE
O SUBSCALE OF THE POI (SIGNIFICANT AT .05 LEVEL)

| YEARS | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| 0 - 9 | 43.46 | 37.15 | 26 | 40.30 | 6.31 |
| 10 - 19 | 48.65 | 44.34 | 26 | 46.49 | 4.31 |
| 20 - 29 | 50.55 | 44.52 | 40 | 47.53 | 6.03 |
| 30 - Up | 47.18 | 42.43 | 16 | 44.81 | 4.75 |

0 - 9, 30 - Up, 10 - 19, 20 - 29

Note: A line joining two numbers implies that the means were not different.

TABLE 6

THE EFFECT OF AGE ON THE EX SUBSCALE OF THE POI
(SIGNIFICANT AT .05 LEVEL)

| AGE | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE-POST) |
|---|---|---|---|---|---|
| 20 - 29 | 19.71 | 22.71 | 14 | 21.25 | 3.00 |
| 30 - 39 | 16.07 | 19.00 | 13 | 17.53 | 2.93 |
| 40 - 49 | 16.90 | 20.30 | 33 | 18.60 | 3.40 |
| 50 - Up | 17.04 | 19.02 | 48 | 18.03 | 1.98 |

30 - 39, 50 - Up, 40 - 49, 20 - 29

Note: A line joining two numbers implies that the means were not different.

TABLE 7

THE EFFECT OF SEX ON THE EX SUBSCALE OF THE POI
(SIGNIFICANT AT .01 LEVEL)

| SEX | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| Male | 18.31 | 21.17 | 35 | 19.74 | 2.86 |
| Female | 16.71 | 19.27 | 73 | 17.99 | 2.56 |

POI

TABLE 8

THE EFFECT OF CHURCH AFFILIATION ON THE
EX SUBSCALE OF THE POI (SIGNIFICANT AT .01 LEVEL)

| CHURCH AFFILIATION | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| Baptist | 17.75 | 21.37 | 32 | 19.56 | 3.62 |
| Methodist | 18.27 | 20.78 | 33 | 19.53 | 2.41 |
| Church of Christ | 15.30 | 18.15 | 26 | 16.73 | 2.85 |

Church of Christ, Methodist, Baptist

Note: A line joining two words implies that the means were not different.

TABLE 9

THE EFFECT OF CHURCH AFFILIATION ON THE
S SUBSCALE OF THE POI (SIGNIFICANT AT .05 LEVEL)

| CHURCH AFFILIATION | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| Baptist | 10.75 | 11.87 | 32 | 11.31 | 1.12 |
| Methodist | 11.69 | 12.00 | 33 | 11.84 | .31 |
| Church of Christ | 9.65 | 10.96 | 26 | 10.30 | 1.31 |

Church of Christ, Baptist, Methodist

Note: A line joining two words implies that the means were not different.

TABLE 10

THE EFFECT OF CHURCH AFFILIATION ON THE
A SUBSCALE OF THE POI (SIGNIFICANT AT .05 LEVEL)

| CHURCH AFFILIATION | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| Baptist | 15.62 | 16.81 | 32 | 16.21 | 1.19 |
| Methodist | 15.45 | 16.33 | 33 | 15.89 | .88 |
| Church of Christ | 13.42 | 15.15 | 26 | 14.28 | 1.73 |

Church of Christ, Methodist, Baptist

Note: A line joining two words implies that the means were not different.

POI

TABLE 11

THE EFFECT OF SEX ON THE A SUBSCALE OF THE POI
(SIGNIFICANT AT .05 LEVEL)

| SEX | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| Male | 16.97 | 18.82 | 35 | 17.89 | 1.85 |
| Female | 15.63 | 17.78 | 73 | 16.70 | 2.15 |

TABLE 12

THE EFFECT OF AGE ON THE SA SUBSCALE OF THE POI
(SIGNIFICANT AT .05 LEVEL)

| AGE | PRETEST | POST TEST | N | MEAN | DIFFERENCE (PRE - POST) |
|---|---|---|---|---|---|
| 20 - 29 | 16.00 | 18.35 | 14 | 17.17 | 2.35 |
| 30 - 39 | 14.07 | 15.53 | 13 | 14.80 | 1.46 |
| 40 - 49 | 15.57 | 17.03 | 33 | 16.30 | 1.46 |
| 50 - Up | 14.56 | 16.20 | 48 | 15.38 | 1.64 |

30 - 39, 50 - Up, 40 - 49, 20 - 29

Note: A line joining two numbers implies that the means were not different.

3. Semantic Differential

A Semantic Differential test based on Osgood and Tannenbaum's (10) work was administered to the experimental and control groups. The concepts used on this test were:

a. Sensivity Training
b. Superior
c. Self
d. Relationship to Others
e. Principal
f. Student
g. Trainer

This test was administered to find out if as a result of exposition to Human Relations Training the subjects' perception of the above concepts changes significantly. This test was scored by the method suggested by Osgood and Tannenbaum (10).

Two kinds of analyses were undertaken on this data.

1. A study of the overall changes in the concepts being measured; and
2. A study of changes in these concepts on the basis of the three subscales of Evaluation, Potency and Oriented Activity which were computed as suggested by Osgood and Tannenbaum (10).

Tables 13, 14 (pages 23-24) give details of these analyses.

It seems that the only concept that changes significantly for the experimental group ($p < .04$) so far as the overall changes are concerned is that of a Superior (page 23). There is no difference between the experimental and control groups changes for the rest of the concepts.

Table 14 (page 24) gives data about the changes in the experimental and control groups for Evaluation, Potency and Oriented Activity. Changes in Potency and Oriented Activity for the experimental group for the concept of Superior are statistically significant. The experimental group also changes significantly for the concepts of Principal and Trainer in terms of Potency.

For all other concepts there seems to be no difference between the experimental and control groups.

On the basis of this data analysis, it seems that educators as a result of Human Relations Training tend to view Superiors, Principals and Trainers as more powerful and influential. It also seems that they gain a better insight into their own selves (concept of self for experimental group is significant at .001 level for the evaluation subscale).

TABLE 13
COMPARISON BETWEEN EXPERIMENTAL AND CONTROL GROUPS
ON TOTAL AMOUNT OF CHANGE
ON SEMANTIC DIFFERENTIAL RATINGS

| Concept | Average Rank Experimental | Control | p |
|---|---|---|---|
| 1. Sensitivity Training | 65 | 74 | N.S. |
| 2. Superior | 72 | 60 | .04 |
| 3. Self | 71 | 62 | N.S. |
| 4. Relationship to Others | 69 | 66 | N.S. |
| 5. Principal | 69 | 65 | N.S. |
| 6. Student | 71 | 63 | N.S. |
| 7. Trainer | 67 | 70 | N.S. |

TABLE 14

CHANGES FROM PRETEST TO POST TEST 2
IN SEMANTIC DIFFERENTIAL JUDGEMENTS
FOR EXPERIMENTAL AND CONTROL GROUPS

| | Evaluation | | Potency | | Oriented Activity | |
|---|---|---|---|---|---|---|
| | Exp. | Cont. | Exp. | Cont. | Exp. | Cont. |
| 1. Sensitivity Training | N.S. | N.S. | N.S. | N.S. | N.S. | N.S. |
| 2. Superior | N.S. | N.S. | .02 | N.S. | .02 | N.S. |
| 3. Self | .001 | N.S. | N.S. | N.S. | N.S. | N.S. |
| 4. Relationship to Others | N.S. | N.S. | N.S. | N.S. | N.S. | N.S. |
| 5. Principal | N.S. | N.S. | .04 | N.S. | N.S. | N.S. |
| 6. Student | N.S. | N.S. | N.S. | N.S. | N.S. | N.S. |
| 7. Trainer | N.S. | .05 | .02 | N.S. | N.S. | N.S. |

4. Leary Interpersonal Checklist

Description:

The theoretical background of this system of personality, the current research findings and its clinical application are described in detail in a book, "The Interpersonal Diagnoses of Personality."

Briefly speaking, this scale has eight subscales. These are listed and described below:

1. Managerial-Autocratic, (AP): A person scoring high on the subscale is dictatorial and expects everyone to admire him. He manages others and is bossy. He tries to be too successful and always gives advice to others. A person scoring low on this scale likes responsibility, is a good leader and is forceful. He is able to give orders, makes a good impression and is often admired and respected by others. He is well thought of.

2. Competitive-Narcissistic, (BC): A person scoring high on this subscale is cold and unfeeling, egotistical and conceited. He is shrewd and calculating and thinks only of himself. He is somewhat snobbish, proud and self-satisfied, and boastful. A person scoring low on this subscale can be indifferent to others. He is self-reliant, assertive, self-confident, independent and businesslike. He likes to compete with others. He is able to take care of himself and is also self-respecting.

3. Aggressive-Sadistic, (DE): A person scoring high on this subscale is hard hearted, cruel and unkind. He is often unfriendly, frequently angry and outspoken. He is impatient with others' mistakes. He is self-seeking and sarcastic. A person scoring low on this subscale is straightforward and direct. He is critical of others and irritable. He is hard-boiled when necessary, stern but fair and firm but just. He can be frank and honest and can be strict if necessary.

4. Rebellious-Distrustful, (FG): A person scoring high on this subscale is rebellious against everything and distrusts everybody. He is bitter, resentful and complaining. He is jealous, stubborn and slow to forgive a wrong. A person scoring low on this subscale is skeptical, often gloomy and resents being bossed. He is hard to impress, touchy and easily hurt, and frequently disappointed. He can complain if necessary and is able to doubt others.

5. Self-effacing-Masochistic, (HI): A person scoring high on this subscale is always ashamed of himself. He is shy, timid and self-punishing. He is spineless, meek, passive and unaggressive, and obeys too willingly. A person scoring low on this subscale is modest, easily led and usually gives in. He is able to criticize himself and can be obedient.

6. Docile-Dependent, (JK): A person scoring high on this subscale is a clinging vine and will believe anyone. He is dependent, wants to be led and hardly ever talks back. He is easily fooled. He likes to be taken care of and lets others make decisions. A person scoring low on this subscale is often helped by others, admires and imitates others and is very respectful to authority. He accepts advice readily, is trusting and eager to please and very anxious to be approved of. He is grateful and appreciative.

7. Coop.-over-Conventional, (LM): A person scoring high on this subscale agrees with everyone and loves everyone. He will confide in anyone, is too easily influenced by his friends and wants everyone's love. He likes everybody and is friendly all the time. A person scoring low on this subscale is warm, sociable and neighborly. He is affectionate and understanding and wants everyone to like him. He is always pleasant and agreeable and eager to get along with others. He is cooperative and friendly.

8. Responsible-Hypernormal, (NO): A person scoring high on this subscale tries to comfort everyone. He spoils people with kindness, is too willing to give to others, is overprotective of others and is generous to a fault. He is oversympathetic, forgives anything and is too lenient with others. A person scoring low on this subscale enjoys taking care of others. He is kind, reassuring, tender and softhearted. He gives freely of himself and encourages others. He is helpful and considerate.

Results:

The changes in the experimental group as assessed by Leary's Interpersonal Checklist are quite striking. The experimental group shows a significant ($p < .05$) decrease in seven out of the eight subscales.

Tables 15, 16 and 17 summarize the statistical findings so far in this context.

More specifically, it can be concluded that as a result of exposition to the Human Relations Training program, the educators viewed themselves as having changed on the following personality dimensions:

a) They saw themselves as good and forceful leaders. They said that they liked responsibility and giving orders. They reported that they were able to give orders and command respect of others.

b) They viewed themselves as being more straightforward and direct. They felt that they were more frank and honest and firm but just in their decisions.

c) They reported to have become less rebellious and less distrustful of others. They acquired the ability to complain in a realistic manner whenever necessary.

d) They said that they were less timid and less self-punishing. They said that they were able to look at themselves realistically and criticize themselves if necessary.

e) They reported that they had been able to develop a realistic respect for authority and they became more appreciative of the help of others.

f) They viewed themselves as being more sociable and neighborly and made a conscious effort to get along with others. They also saw themselves as friendly and cooperative.

g) They viewed themselves as giving more freely of themselves and helped others. They also felt they became more considerate.

An additional finding concerning the changes in the experimental group was that the changes tended to occur some time after training was over rather than immediately after the two week training laboratory. No significant differences in scores occurred between the pretest and the first post-test. Yet when the pretest is compared with the second post-test, the differences noted above appeared. This is congruent with other theories of personal change as a result of group experience in that the application of new interpersonal skills acquired "in group" have a cumulative effect over time to change self-concept gradually as positive "back home" experiences are built up.

These results are summarized in Figures 1 and 2. The general concept that the teachers have of themselves can be readily compared with the view held by their students if Figure 3 is compared with Figures 1 and 2. The differences are quite striking and are probably a reflection of the students' stereotype of adult authority and the teachers' dislike of viewing themselves negatively, particularly in terms of hostility and authoritarianism. This point is discussed in detail later.

TABLE 15 Means and Standard Deviations, Experimental Group, Interpersonal Checklist (N=94)

| SCALE | PRETEST | POST-TEST 1 | POST-TEST 2 |
|---|---|---|---|
| AP | Mean - 5.52 | 5.33 | 4.70 |
| | S.D. - 2.69 | 2.81 | 2.74 |
| BC | Mean - 5.97 | 5.84 | 5.72 |
| | S.D. - 2.17 | 2.31 | 2.53 |
| DE | Mean - 6.57 | 6.28 | 6.04 |
| | S.D. - 2.67 | 2.50 | 2.57 |
| FG | Mean - 4.43 | 4.17 | 3.77 |
| | S.D. - 2.25 | 2.22 | 2.12 |
| HI | Mean - 6.55 | 6.16 | 5.23 |
| | S.D. - 2.94 | 2.82 | 2.67 |
| JK | Mean - 7.97 | 7.56 | 6.76 |
| | S.D. - 2.46 | 2.84 | 2.61 |
| LM | Mean - 8.65 | 8.43 | 7.79 |
| | S.D. - 3.12 | 3.12 | 2.88 |
| NO | Mean - 8.56 | 8.20 | 7.51 |
| | S.D. - 2.81 | 3.16 | 3.17 |

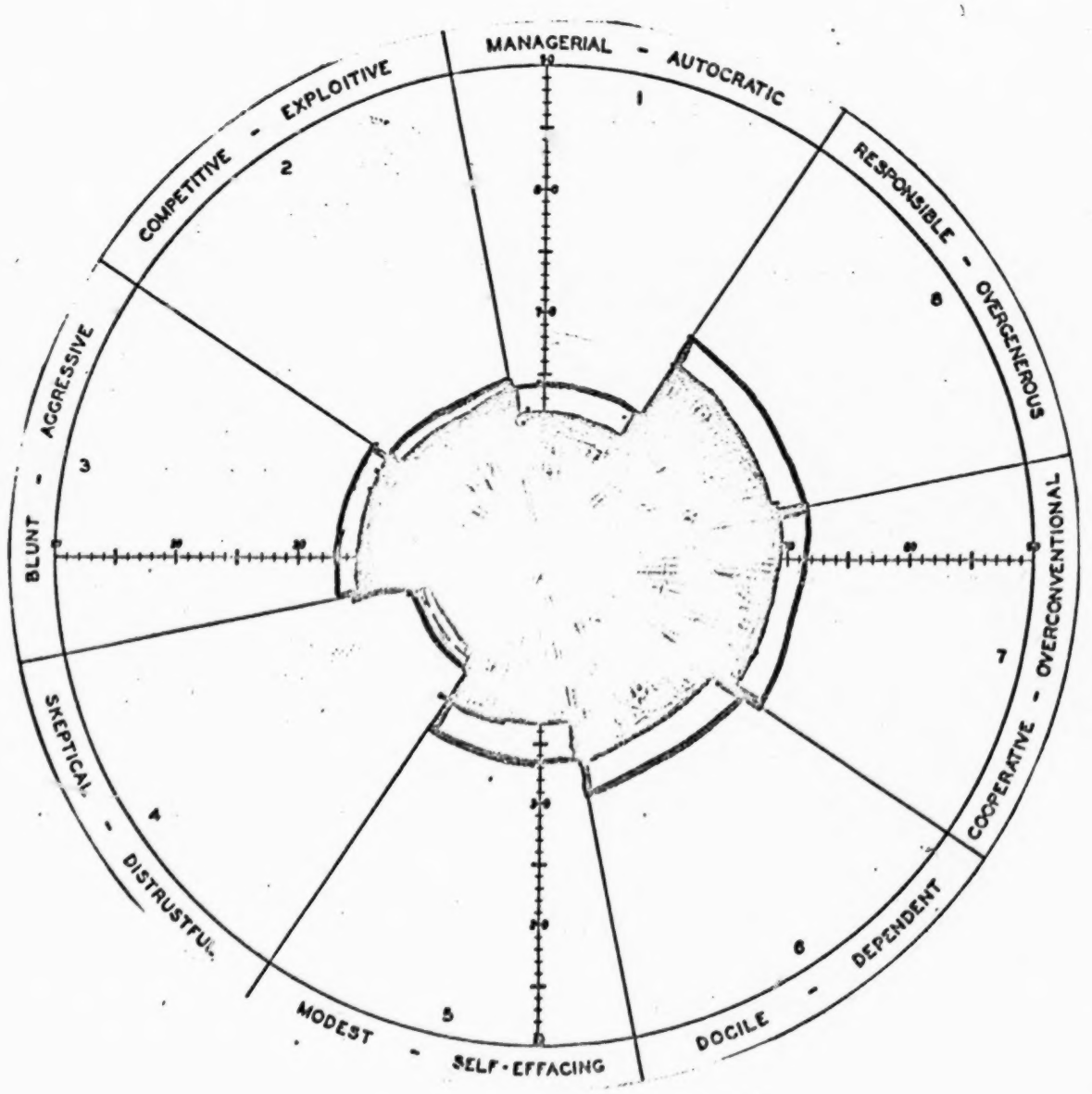
TABLE 16: Control Group, Pre- and Post-test Results on Interpersonal Checklist with Significance Tests

| SCALE | PRETEST | POST-TEST 1 | SIGNIFICANCE OF CHANGE |
|---|---|---|---|
| AP | Mean - 4.93<br>S.D. - 2.64 | 4.96<br>2.36 | NS |
| BC | Mean - 5.60<br>S.D. - 2.24 | 5.60<br>1.91 | NS |
| DE | Mean - 5.67<br>S.D. - 2.25 | 5.56<br>2.16 | NS |
| FG | Mean - 3.18<br>S.D. - 2.28 | 3.40<br>2.04 | NS |
| HI | Mean - 5.13<br>S.D. - 2.61 | 4.96<br>2.48 | NS |
| JK | Mean - 6.51<br>S.D. - 2.17 | 5.49<br>1.85 | $p<.01$ |
| LM | Mean - 8.02<br>S.D. - 3.22 | 7.38<br>2.69 | NS<br>$p<.10$ |
| NO | Mean - 7.67<br>S.D. - 2.89 | 7.44<br>2.89 | NS |

TABLE 17: Test of Significance of Changes in Experimental Group Mean Scores

| SCALE | Pretest vs Post-test 1 | Post-test 1 vs Post-test 2 | Pre- vs Post-test 2 |
|---|---|---|---|
| AP | NS | $p<.05$ | $p<.01$ |
| BC | NS | NS | NS |
| DE | NS | NS | $p<.05$ |
| FG | NS | $p<.05$ | $p<.05$ |
| HI | NS | $p<.01$ | $p<.05$ |
| JK | NS<br>$p<.10$ | $p<.01$ | $p<.01$ |
| LM | NS | $p<.05$ | $p<.05$ |
| NO | NS | $p<.05$ | $p<.05$ |

FIGURE 1: Self Rating of Teachers
in the Experimental Group

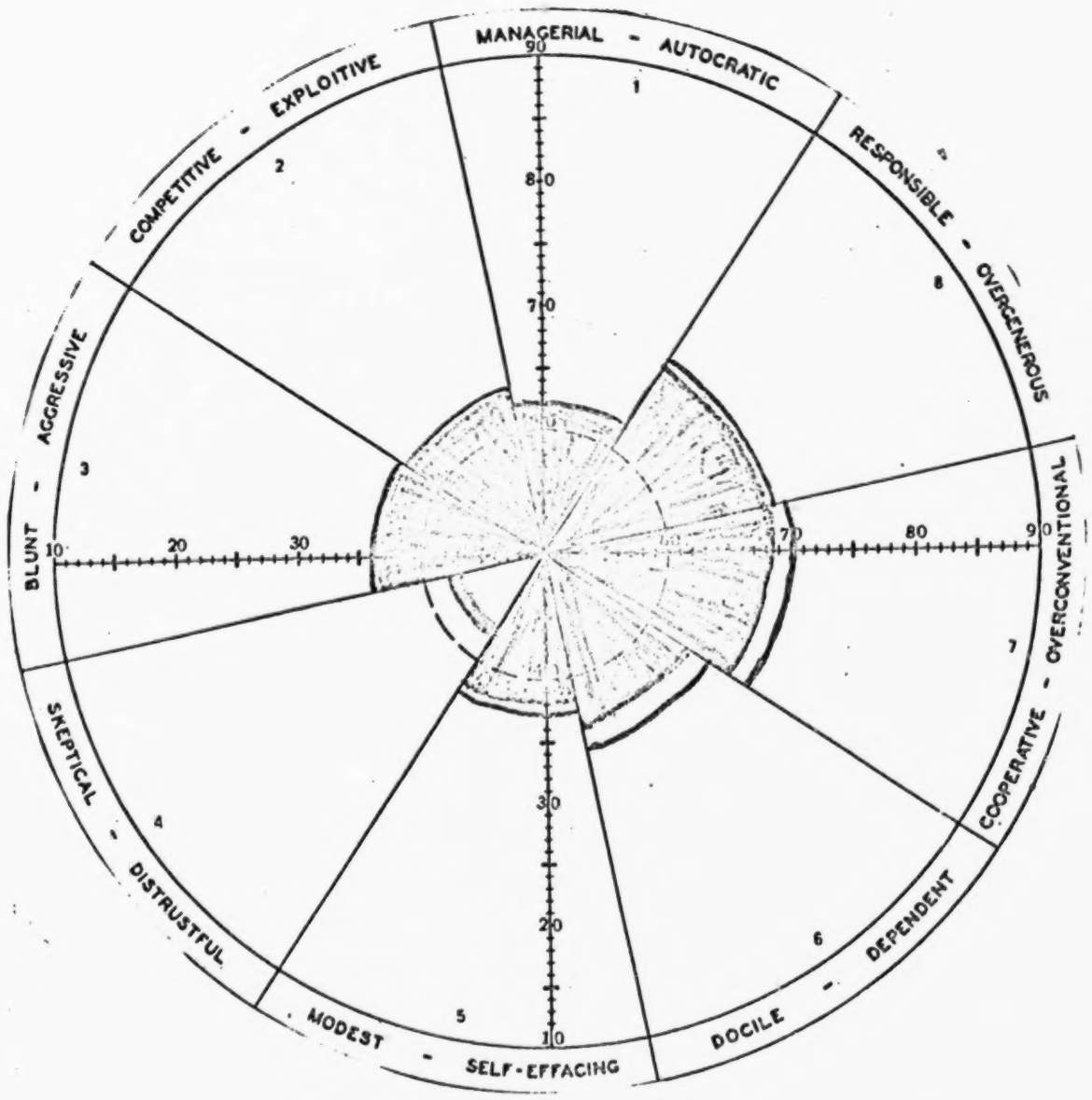



Pretest Score - ▭

Post-test Score - ▭

This profile shows a comparative relationship of the various scales of the Interpersonal Checklist on both the pretest and the second post-test. The decrease in scores on all scales can easily be seen.

FIGURE 2: Self Rating of Teachers
in the Control Group

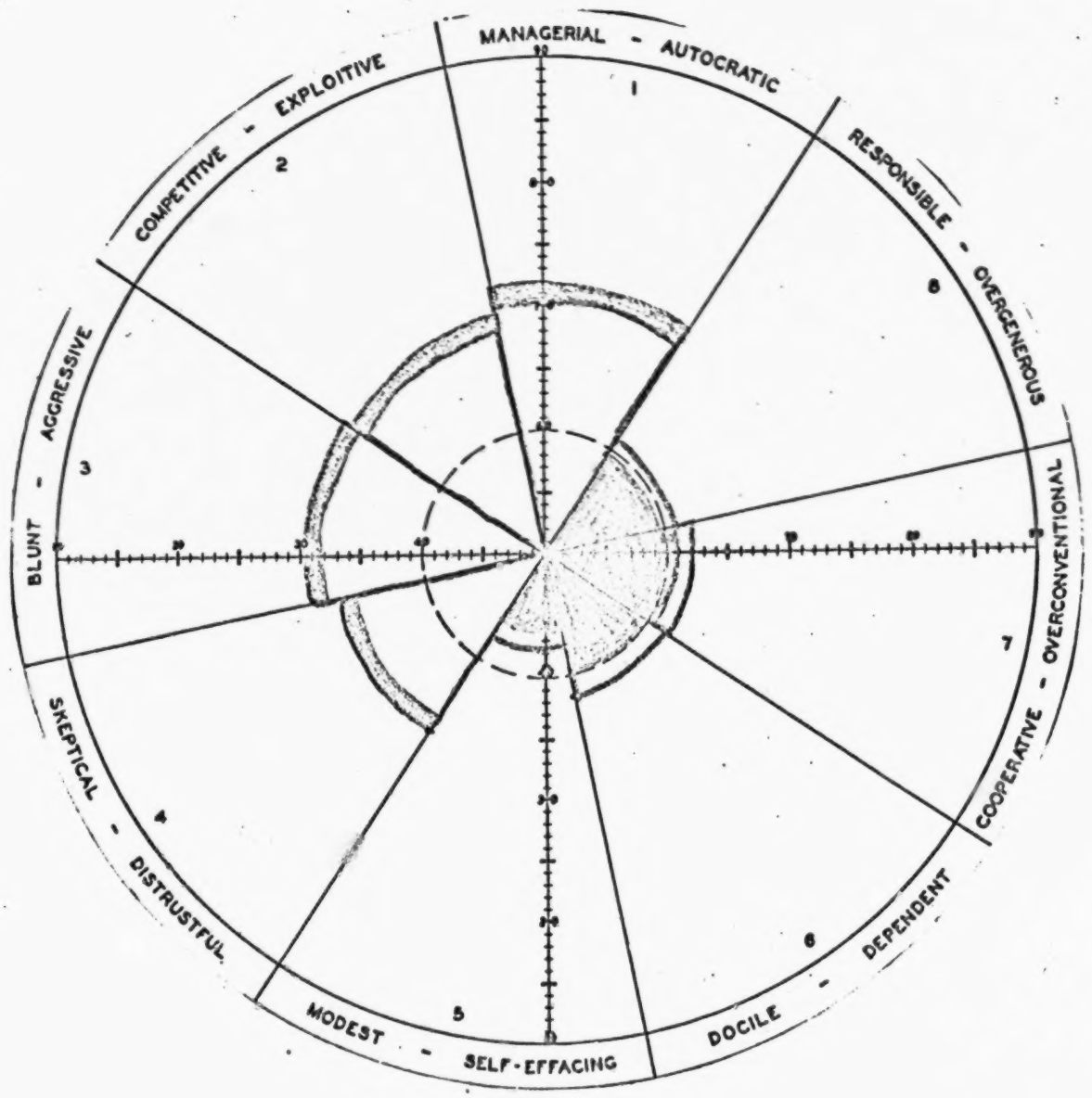



Pretest Score - ☐

Post-test Score - ▨

This pattern shows graphically the general lack of change in the Control Group's scores. A comparison of this figure and Figure 1 shows that teachers both with and without training have similar views of their interpersonal characteristics, as opposed to their students who see them quite differently, as shown in Figure 3.

FIGURE 3: Ratings of Teachers
by Students




Experimental Group - ▭

Control Group - ▭

This diagram shows the interpersonal evaluation of teachers in both the control and experimental groups. To be noted particularly is the reversal of direction of mean differences between scales 1 thru 4 and 5 thru 8. This is consistent with the hoped for result that teachers with training would be more open and less punitive in dealing with their students.

## FURTHER ANALYSIS OF THE F SCALE AND LEARY INTERPERSONAL CHECKLIST DATA

When the initial analysis of our data revealed a number of very significant changes in the mean scores of the experimental group on both the F Scale and the Leary Interpersonal Checklist, it was decided to continue the analysis by correlational methods in an attempt to discover what variables were related to these changes. An additional hope was to understand the effects of a group experience in a group of strangers (heterogeneous groups) versus a group made up of co-workers from "back home" (homogeneous groups). This analysis was done in two steps, with the first being a complete correlation study of all variables involved, and the second being a multiple regression attempt at predicting the changes in both the F Scale and the Leary Checklist Scales.

The prediction variables were eleven demographic characteristics, including (see Table 18) age, marital status, sex, number of professional years in education, number of years as a teacher, number of non-teaching (administrative) years, number of years in college, income in thousands, number of dependents, population of the town of residence, and whether or not the subject receives supplemental salary from either moonlighting or extra teaching duties such as coaching. An additional variable was the kind of group the subject was in. The other prediction variables used were the raw scores at the initial testing of each scale. This variable was included since it was felt that initial level on any given scale would be important in understanding the direction and magnitude of change in that scale.

As our criterion scores for prediction, three indices of change were computed for each scale, the first being an overall change score derived from the difference between the initial level on the scale and the second post-testing. This score will be referred to in this analysis of the test scores as the "overall change" score. The second criterion score is derived from the difference in scores between the pretest and the first post-testing which followed immediately after the training sessions. This score will be referred to in the future as the "within session" change. The third score for each scale is derived from the change between the end of the training sessions (i.e. first post-test) and the second post-test, the time between the end of training and the follow-up six months later. This score will be designated the post-testing or "between" score in the body of the report. These criterion scores were derived by means of subtraction so that a negative change score indicates a decrease in overall score while a positive change score indicates an increase in score. For example, a subject

who scored 110 on the F Scale pretest and who scored 105 on the first post-test immediately after training would have a within session change score of -5. This fact must be kept in mind in interpreting the sign of the correlation coefficients derived.

The correlation analysis contains 48 variables; eleven demographic characteristics, group membership, three scores each for the F Scale and the eight subscales of the Leary Checklist, and the nine pretest scores for the F Scale and the Leary Checklist. A correlational analysis of this 48 variable problem was carried out on a IBM-360 Model 40 Computer utilizing a multiple regression and correlation program called the BMD-02R developed and revised by the Health Sciences Computing Facility of UCLA. The resulting 48 x 48 correlation matrix and 27 prediction equations provided the hard data for this section of this report.

General Findings of the Correlation Matrix

To attempt to interpret a correlation matrix of this size containing some fourteen hundred correlations is at best a complex and difficult proposition. To make this process more understandable the matrix had to be borken down into manipulatable parts. In addition, there is the problem in a matrix of this size of artifactual correlations of significant size occurring purely by chance. To minimize this latter problem, no correlations smaller than .20 (the .05 Level of significance) will be interpreted as a relationship and those which are greater than this size will be interpreted with great caution. The reader is reminded also that a correlational relationship is in no way indicative of a causative relationship and must be interpreted with great caution in a single sample study. Another caution is that any prediction equation cannot be taken as fact until it has been cross-validated on an independently drawn sample from the same population.

With these cautions in mind, the overall matrix was subdivided into meaningful divisions for analysis. The first area of interest for any correlational study is the intercorrelation of one's predictor variables since independence of these variables is important for accurate prediction. As can be seen from Table 8, the correlations range from essentially zero to the artificially inflated value of .90. There are, however, some moderate relationships which do not appear to be artifactual which deserve comment. Besides the artifactual high correlation between age and number of professional years and number of teaching years, there appears to be a moderate relationship between sex and number of non-teaching (administrative) years, suggesting that more males go into the administrative field. Sex seems to be related in a positive way to being an administrator having a higher income, having a larger number of dependents and receiving supplemental salary. In any case, the independence of the variables is somewhat limited which probably lowers their ability to predict changes to a great extent.

The next attempt at analysis involves the correlations of the twelve demographic variables with changes in the various scales. Table 19 shows the correlations of these variables with changes in the F Scale. In overall changes, it will be noted that only sex, income, and supplemental salary are significantly related to change. Note also that the kind of group used is in no way related to changes in the F Scale. This suggests that authoritarianism was reduced independent of knowing or not knowing the members of one's T-group. All the relationships noted are negative suggesting that of these predictors those most associated with decreases in score are being male, having a higher than average (for this sample) income and receiving supplemental salary. The other correlations on this Table are small and probably not overly useful in prediction.

Table 20 shows the same information for the eight sub-scales of the Leary Self-Concept, covering only the overall changes. In interpreting these correlational values, it is a necessity to keep in mind what each scale attempts to measure. In Scale AP, which relates to managerial-autocratic kinds of self-perception, being male, having less than average education, and being in a stranger group were associated with decreases in score. In Scale BC, related to competitive kinds of self-perception, only being in a stranger group seemed to be related to decreases in score. No significant correlations appeared in Scales DE or FG. Scale HI, however, having to do with self-effacing, masochistic kinds of attitudes, seem to have decreases in score related to being younger than average, having less experience, not being an administrator and being in a hetero-geneous group. JK, a scale having to do with submission and being dependent, showed decreases in the younger, less experienced numbers of the subject poll. For Scale LM, having to do with being cooperative and overly conventional, the only significant relationship was with number of non-teaching years, suggesting that the non-administrators were more likely to decrease in score on this variable. Scale NO showed no significant correla-tions. The lack of large numbers of significant correlations in this Table suggests that our efforts at predictions of changes from these demographic variables is slated for large disappoint-ments, without the inclusion of some other more highly correlated variables. However, the correlations that are significant in this Table do appear to be meaningful relationships and make sense in terms of interpretation.

In an effort to find other more reliable predictors, it was felt that the level of score initially would be related to changes in that score over time. For this purpose, the pretest raw scores on each scale was included as a predictor of that scale. The intercorrelations of these scores for the Leary Check-list and the correlations of the Leary with the F Pretest are shown in Table 21. The results are an interesting exercise in scale validation in that the Leary Interpersonal Checklist was developed empirically to show clusters of related self-perceptions which should be correlated with each other but not with the other scales. This is exactly what was discovered in the analysis of these results. The highest correlations of these scales tend to be those which are supposed to go together into the dominance and love composite scores. The dominance score comes from a composite of Scales AP, BC, DE and FG. As may be noted, the intercorrelations of these four scales are higher than the correlations with the other four scales. On the other hand, the love score comes from a combination of HI, JK, LM and NO. As may be noted again the intercorrelations of these four scales are in general higher than the correlations with any of the other scales. This suggests that our subjects are in fact performing on this scale as they should.

An additional bit of information from Table 21 is that the F Scale is by and large uncorrelated with the interpersonal styles contained in the Leary. The only relationships which are significant are with Scales LM and NO. This is exactly what would be expected from the theoretical rationales of both the F Scale authoritarianism description and the two scales in question. Scale LM is supposedly related to overcooperative overly conventional interpersonal attitudes while NO has to do with being super-responsible and hypernormal. These should relate to the conventionality, stereotyped behavior and rigidity of the authoritarian. The correlations are positive as would be expected.

Table 22 shows the relationship between the demographic variables originally used as predictors and the pretest levels of both the F Scale and the Leary Interpersonal Checklist. First, high scores on the F Scale (indicating authoritarian attitudes) seem to be related to increased income, older than average age, higher than average professional years and teaching years, and inversely related to the amount of education. This suggests that, as might be expected from the kinds of attitudes that go into authoritarianism, the older one gets, the longer in one's profession, the less flexible and the more rigid one becomes. However, there is a tendency for education, with its exposure to more kinds of people and ideas, to moderate this effect and decrease the rigidity and conventionality associated with authoritarianism.

The correlations of the demographic variables with the Interpersonal Checklist Scales are by and large not significant. There is a tendency for the married subjects to score higher on the two scales dealing with being cooperative and relating to others in a responsible conventional way, a tendency for males to be more managerial and autocratic. In addition, those people with high incomes tend to be more managerial and autocratic and competitive. This is an expected and reasonable relationship. An additional interesting tendency, although not significant, is for sex (being male) to correlate positively with the scales associated with dominance and negatively with the scales associated with the love score. This relationship seems also expected in view of the cultural stereotypes of maleness and femaleness. The amazing thing is that the correlations are not larger since the part of the country from which the sample was drawn places great emphasis upon the separateness and differentness of the male-female role model.

Table 23 shows the correlations of the pretest scores with the changes in the scales in question. It will be noted that the correlations of the pretest scores with overall changes in score are all negative and quite substantial in size. Note also

that the pretest level of scores also correlates significantly with changes within training session but not with changes between sessions after training. This difference has to do with the pattern of changes within the group, with many people increasing during the session and others decreasing but with an overall change toward decreased scores. This relationship is analyzed further in Figures 4 and 5 of this report. In general, however, it may be said that the relationship between the pretest score and the overall change is that those scoring high initially tend to decrease over time. Those scoring low tend to increase slightly yielding a definite overall decrease in score.

At the other end of any prediction problem are your criterion measures, in this case the change scores for the various scales used. Table 24, shows the intercorrelations of the overall changes for the Leary Checklist. As was the case in the pretest scores, the correlations tend to fall in clusters with those scales most related to each other showing the highest correlation of change. This suggests that the more similar attitudes measured by two scales, the more alike their changes were.

Table 25 shows the correlation of changes in a given scale within training, after training and overall. Again the pattern of correlation is the same for all scales and may be generally characterized as a high positive correlation between the overall changes and changes after training, a relationship that could be expected from the changes in mean score. The unexpected result was the significant and quite large negative correlations between the changes within the session and those after the session. This relationship suggests that in general people who increase in score during the session, decrease after they get out of the session and vice versa. This relationship was found to be true and is diagramed in Figures 4 and 6 through 13. This was the initial suggestion for the reasons for no significant change in mean score within the session. It suggested that there were subjects changing in a regular way but going in opposite directions during the two periods of measurement. That this was the case was an unexpected but helpful result in understanding the changes in means.

The most ready generalization from the findings are that the demographic characteristics chosen are not particularly good predictors of changes in the two scales used. It does, however, show that the attitudes measured in the Leary Interpersonal Checklist and the F Scale are relatively independent of each other and a finding not yet reported in the literature.

The next section of this report is devoted to a very important problem in training groups---i.e. how to predict how many and which individuals are going to benefit from training.

Interpretation of the Multiple Regression Analysis

Because of the independence of the two scales, it was decided to analyze the prediction equations and prediction results for the F Scale separate from the Leary Checklist. Because of the complex changes hinted at by the intercorrelations of the changes in the F Scale, the direction of the changes both within the session and between the session were cross-plotted on the chart shown in Figure 4 . This chart shows that within the session 47 people increased in score, 2 remained the same and 44 decreased in score. This readily explains the non-significant change in mean score. However, during the follow-up period, noted here as between, 61 people decreased in score while 32 people increased. This is the reason for the negative correlation which occurred during this follow-up period. It is interesting to note, however, that there are 61 people of the 93 who showed both increases and decreases over the whole time period studied. These are shown in the diagonally marked corner cells of Figure 4 .

Further analysis is needed to understand exactly the reasons for these changes and to discover what kinds of people consistently decrease, what kinds consistently increase and those who show bidirectional changes. In any case, within this complex relationship of changes, it was felt that the change of interest to this experiment was the overall change in authoritarianism as a result of T-group experience. Therefore, the analysis of the differential changes within session and following sessions were left for future analysis and the prediction attempt was focused on the overall change in score.

Figure 5 shows the results of this multiple regression attempt. As may be seen from the figure, the resulting multiple correlation was .68, a fairly respectable figure. The standard error of estimate was 12.83, showing that our errors of prediction were fairly substantial. The variables used were the pretest score, income, number of professional years, sex, number of college years, and marital status. From the direction (sign of the beta coefficient) it may be seen that the variables connected with decreased scores on the F Scale are having a high pretest score, having higher than average income, being low in professional years, being male, having more education than usual and being married. The variables are listed in order of relationship and the latter two or three reflect very mild relationships. This result gives rise to several hypotheses but the one that appears most likely to this writer is that those people who are more openly authoritarian at the outset of T-group

experience tend to become less so as a result of their new experiences and exposure to differing ideas and attitudes. On the other hand those people who are defensive about their authoritarian attitudes initially become more open about their attitudes and thus increase slightly in score during the session. After the session, however, two-thirds of the subjects decrease in score, perhaps reflecting the application of new sensitivity and flexible attitudes learned in the group. This, of course, relates to the final result of decreased authoritarianism over the whole group. One of the problems with this hypothesis is that 32 people actually increased in authoritarianism over the whole time. Some of these decreased initially but went back up to their previous level or higher over the whole session. Others, 11 of them, increased initially but came back down to a score above their initial level. Only 9 people actually continued to increase in authoritarianism over the whole time of the study. A scatter plot of the changes reveals, however, that these people were by and large people who scored lower than average on authoritarianism in the beginning and thus tends not to negate the hypothesis of less defensiveness and new experiences casuing people to be more open about their attitudes and more flexible in their approach to other people.

The variables involved here suggest again what one would expect in dealing with authoritarian attitudes; that the older, the more conservative and the more experience a person has with a given social system, the more likely one is to absorb the socially accepted and conventional attitudes and the more rigid these attitudes become. The implications for T-grouping here are that these people who are more rigid benefit the most from the group experience in terms of decreased authoritarianism.

The results of prediction show that it is much easier to predict those people who decrease in score than it is to predict those who will increase. However, the overall prediction level is quite acceptable for the individual case. In this sample, the equation listed above correctly predicted 73 of the 92 subjects who changed in score over the whole time covered. This is a 79% accuracy and is probably acceptable as an increase over random selection of subjects. Also, it is much more accurate in selecting subjects who will decrease in score, correctly picking 54 of the 60.

Results of Prediction on the Leary Interpersonal Checklist

To begin the analysis of prediction on the Leary Checklist, the changes present were analyzed as to when and where they occurred as was noted above in the F Scale. In the eight subscales of the Interpersonal Checklist, the changes followed a pattern similar to that of the F Scale, as can be seen in Figures 6 through 13 . In all scales there were subjects going in both directions, both increasing and decreasing within their T-group sessions. These changes were approximately equal to being slightly more heavily weighted on the decrease side. This clearly explains the reason for the nonsignificant decreases in mean score during the T-group sessions. As in the F Scale, the changes during the follow-up or between period showed the same reversal of direction in as many as 50 of the cases out of 93, but with a preponderance of decreasing scores. This leads to the overall result noted underneath the 3 x 3 charts (pages 55-62) with 45 to 64 of the 93 subjects showing an overall decrease in score on the various scales.

It is interesting to note that in Scale BC, the only scale which did not show significant change in mean score over the whole time, the number of subjects increasing and decreasing were relatively stable so that people returned almost exactly to their pretest level over the whole time period. This result suggests that only about 50% to 60% of the subjects are showing decreases in their scores on the Interpersonal Checklist. This suggests that perhaps this is the percentage of people who benefit from the limited T-group experience offered. This points out the drastic need for efficient prediction as to which people will show the decreases in score. This is the goal of the prediction equations listed in the Figures 14 through 21 . A suggestion for the interpretation of the changes within session and between session is that the T-group session offers an intensive exposure to points of view quite different from the individual's normal social contacts. This leads to a great upheaval or cognitive dissonance and some initial alterations; be they increased defensiveness and increased scores or temporary decreases induced by the intense interaction of the T-group setting. However, in the period following the sessions the person is returned to his normal environment and his old attitudes tend to reassert themselves bringing him back toward his usual level of interaction or his usual style of relating to others. However, since the T-group sessions hopefully will teach new ways of relating and new perceptions of self, the overall pattern for the group is a decrease in score.

Figures 14 through 21 show the multiple correlations derived, the standard error of estimate, the variables included in the prediction equation and their beta coefficients, and finally the outcome of the prediction equation in terms of

correct prediction of direction of change. While this is a rather crude way of displaying the results, it gives a clear picture of how accurately the equations predict changes in this sample of subjects. Again the reader must be cautioned that these are tentative prediction equations and should not be used for actual application until they have been cross-validated.

As can be seen from the Figures 14 through 21, the pretest scores are the strongest predictors of change. They appear in all of the prediction equations and are the heaviest contributors to the multiple correlation. Looking at the results of the prediction, it can be seen that the number of individuals correctly predicted ranged from 53 out of 93 to 64 out of 93. It can also be noted that the lowest number predicted, 53, was in Scale BC in which there was no significant change in mean score. The multiple correlations ranged from about .5 through .7, all of which are significant regressions and useful in prediction where large groups of subjects are available. It further can be noted from the overall accuracy tables that it is much easier to predict the cases which will decrease than it is to predict those that will increase over the overall time period. The reasons for this differential prediction is not readily apparent from the data presently available and should give rise to an inclusion of more variables in future research.

In terms of specifying which variables are most useful in these predictions at present Table 24 shows the frequency of appearance in the prediction equations of all the predictor variables used with the Leary Interpersonal Checklist. It also shows the direction of relationship in each appearance. It can be noted from this that all variables are not equally used. The pretest scores appear in the prediction of all eight scales for overall and within session and in all but one of the eight for the between, always in a negative relationship, suggesting that those people who score highest on the pretest are more likely to decrease in score. Other variables like marital status, teaching years, number of dependents and population appear in very few prediction equations and appear to be not very useful in prediction of changes in the Leary Checklist. Of the demographic variables, number of professional years, number of non-teaching (administrative) years, supplemental salary and group membership appear to be the best overall predictors. The relationships are all positive suggesting that those with large numbers of professional years, longer experience in an administrative position and receiving supplemental salary are less likely to decrease in score. In predicting the changes within session the best predictors appear to be receiving supplemental salary, income and sex suggesting that males with good incomes and not receiving supplemental salary are more likely to decrease within session.

In terms of changes during the follow-up or post-session period, the best predictors for change in this situation are age, college years and group membership, with younger persons with higher education and receiving training in a stranger group showing the most likely decrease in scores.

In general, the results of the prediction and correlational study has offered some hope toward predicting the kinds of people who will benefit most from a T-group experience. Although these results must be taken as tentative and subject to cross-validation on later independently selected samples, it is felt that the results point to the possibility of such selection being valuable. In general, it appears that there are two basic clusters or factors pointing toward decreases in score on the two instruments used here. The first of these is, of course, a pretest level which is in the upper extremes of the sample. In terms of authoritarianism, this means someone who is relatively authoritarian to begin with, before training. In terms of the Interpersonal Checklist, it means someone who falls in the less desirable upper ends of the scale. The other factor tends to be one of flexibility, with those people who have more education and who are younger tending to benefit more.

TABLE 18

INTERCORRELATIONS OF PREDICTOR VARIABLES

| VARIABLES | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age in Years | -.00 | -.09 | .81 | .76 | .21 | .01 | -.04 | -.14 | -.24 | -.14 | .05 |
| 2. Marital Status (1= Married, 0= Single) | | .11 | .06 | .01 | .10 | -.08 | -.06 | .11 | .08 | -.03 | -.20 |
| 3. Sex (1= Male, 0= Female) | | | -.04 | -.16 | .33 | .19 | .37 | .50 | .07 | .50 | -.17 |
| 4. Number of Professional Years | | | | .90 | .32 | .16 | -.01 | -.20 | -.10 | -.14 | .04 |
| 5. Number of Teaching Years | | | | | .03 | .10 | -.09 | -.15 | -.22 | -.15 | .12 |
| 6. Number of Non-Teaching Years | | | | | | .20 | .13 | .07 | .06 | .16 | -.09 |
| 7. Number of College Years | | | | | | | .31 | .00 | -.00 | .14 | -.04 |
| 8. Income (in 1000's) | | | | | | | | .14 | .01 | .29 | -.11 |
| 9. Number of Dependents | | | | | | | | | -.20 | .38 | .08 |
| 10. Population of Town of Residence | | | | | | | | | | .02 | -.26 |
| 11. Supplemental Salary (1= Yes, 0= No) | | | | | | | | | | | -.11 |
| 12. Group (1= Heterogeneous 0= Homogeneous) | | | | | | | | | | | |

TABLE 19

CORRELATIONS OF PREDICTORS AND CHANGES IN F SCALE

| | VARIABLES | OVERALL CHANGE IN F SCALE | CHANGES IN SESSION | AFTER SESSION |
|---|---|---|---|---|
| 1. | Age in Years | .04 | .05 | -.00 |
| 2. | Marital Status (1= Married, 0= Single) | -.09 | .04 | -.11 |
| 3. | Sex (1= Male, 0= Female) | -.21 | -.01 | -.18 |
| 4. | Number of Professional Years | .09 | .09 | .01 |
| 5. | Number of Teaching Years | .10 | .03 | .06 |
| 6. | Number of Non-Teaching Years | -.05 | .02 | -.05 |
| 7. | Number of College Years | -.04 | -.07 | .03 |
| 8. | Income (in 1000's) | -.30 | -.23 | -.08 |
| 9. | Number of Dependents | -.15 | -.15 | -.02 |
| 10. | Population of Town of Residence | -.03 | -.05 | .02 |
| 11. | Supplemental Salary (1= Yes, 0= No) | -.28 | -.04 | -.22 |
| 12. | Group (1= Heterogeneous 0= Homogeneous) | .05 | .08 | -.03 |

TABLE 20

CORRELATIONS OF PREDICTORS WITH OVERALL CHANGES IN LEARY'S SELF CONCEPT SCALE

| | VARIABLES | AP | BC | DE | FG | HI | JK | LM | NO |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Age in Years | .14 | .18 | .10 | .05 | .22 | .17 | .11 | .02 |
| 2. | Marital Status (1= Married, 0= Single) | -.00 | .04 | .07 | .04 | -.04 | .01 | -.08 | -.19 |
| 3. | Sex (1= Male, 0= Female) | -.21 | -.11 | .01 | -.05 | -.19 | -.18 | -.02 | -.15 |
| 4. | Number of Professional Years | .05 | .13 | .13 | .04 | .30 | .26 | .19 | .01 |
| 5. | Number of Teaching Years | .07 | .11 | .10 | .04 | .25 | .19 | .16 | .02 |
| 6. | Number of Non-Teaching Years | .02 | .10 | .11 | -.01 | .25 | .27 | .24 | -.02 |
| 7. | Number of College Years | -.28 | -.11 | -.13 | -.04 | .08 | .11 | .06 | .03 |
| 8. | Income (in 1000's) | -.12 | -.15 | -.02 | -.05 | -.00 | .05 | .10 | .06 |
| 9. | Number of Dependents | -.04 | -.06 | .04 | -.04 | -.05 | -.10 | -.05 | -.09 |
| 10. | Population of Town of Residence | -.00 | .03 | .04 | .00 | -.21 | -.06 | -.06 | -.13 |
| 11. | Supplemental Salary (1= Yes, 0= No) | -.14 | -.13 | .12 | -.17 | .02 | .04 | .05 | -.12 |
| 12. | Group (1= Heterogeneous 0= Homogeneous) | .22 | .21 | .16 | -.08 | .20 | .15 | -.10 | .02 |

TABLE 21

INTERCORRELATIONS OF PRETEST RAW SCORES
ON THE LEARY INTERPERSONAL CHECKLIST
AND CORRELATIONS WITH F SCALE PRETEST

| | BC | DE | FG | HI | JK | LM | NO | F |
|---|---|---|---|---|---|---|---|---|
| AP | .62 | .59 | .35 | -.02 | .13 | .21 | .24 | .09 |
| BC | | .57 | .40 | -.01 | .12 | .20 | .15 | .09 |
| DE | | | .60 | .14 | .22 | .12 | .20 | .03 |
| FG | | | | .35 | .43 | .21 | .27 | .14 |
| HI | | | | | .63 | .39 | .30 | .10 |
| JK | | | | | | .58 | .53 | .17 |
| LM | | | | | | | .68 | .33 |
| NO | | | | | | | | .28 |

TABLE 22

CORRELATIONS OF F SCALE AND LEARY INTERPERSONAL CHECKLIST PRETEST RAW SCORES WITH THE PREDICTOR VARIABLES

| | VARIABLES | F | AP | BC | DE | FG | HI | JK | LM | NO |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Age in Years | .38 | -.04 | -.11 | -.03 | .09 | .03 | .09 | .04 | .18 |
| 2. | Marital Status (1= Married, 0= Single) | .05 | -.01 | -.08 | -.15 | .02 | .06 | .16 | .24 | .30 |
| 3. | Sex (1= Male, 0= Female) | -.08 | .25 | .19 | .06 | .16 | -.07 | -.12 | -.11 | -.09 |
| 4. | Number of Professional Years | .34 | -.00 | -.10 | -.02 | .11 | -.10 | .02 | -.03 | .13 |
| 5. | Number of Teaching Years | .34 | -.07 | -.16 | -.01 | .11 | -.03 | .03 | .00 | .12 |
| 6. | Number of Non-Teaching Years | .13 | .13 | .16 | .05 | .06 | -.20 | -.01 | -.13 | .07 |
| 7. | Number of College Years | -.21 | .12 | .14 | .01 | .01 | -.19 | -.09 | -.03 | .08 |
| 8. | Income (in 1000's) | .01 | .22 | .28 | .01 | .05 | -.13 | -.12 | -.08 | -.07 |
| 9. | Number of Dependents | -.04 | .14 | .12 | .08 | .25 | -.03 | .05 | -.07 | -.05 |
| 10. | Population of Town of Residence | -.06 | -.08 | -.22 | -.15 | -.19 | .12 | .03 | .02 | .00 |
| 11. | Supplemental Salary (1= Yes, 0= No) | .04 | .07 | .15 | .05 | .12 | -.16 | -.05 | -.05 | .07 |
| 12. | Group (1= Heterogeneous 0= Homogeneous) | -.02 | .04 | .10 | .04 | .11 | -.02 | .01 | .16 | .03 |

TABLE 23

CORRELATIONS OF PRETEST RAW SCORES WITH CHANGES
(F SCALE AND LEARY CHECKLIST)

| | OVERALL | WITHIN | BETWEEN |
|---|---|---|---|
| F | -.51 | -.32 | -.19 |
| AP | -.45 | -.37 | -.11 |
| BC | -.43 | -.38 | -.13 |
| DE | -.51 | -.45 | -.15 |
| FG | -.55 | -.39 | -.28 |
| HI | -.56 | -.45 | -.20 |
| JK | -.35 | -.25 | -.08 |
| LM | -.56 | -.40 | -.23 |
| NO | -.36 | -.30 | -.08 |

TABLE 24

INTERCORRELATIONS OF OVERALL CHANGES
IN LEARY'S SELF CONCEPT SCALE

| | BC | DE | FG | HI | JK | LM | NO |
|---|---|---|---|---|---|---|---|
| AP | .55 | .41 | .30 | .25 | .27 | .18 | .17 |
| BC | | .50 | .24 | .30 | .26 | .23 | .17 |
| DE | | | .31 | .31 | .26 | .16 | .22 |
| FG | | | | .32 | .26 | .12 | .09 |
| HI | | | | | .62 | .35 | .17 |
| JK | | | | | | .43 | .25 |
| LM | | | | | | | .44 |
| NO | | | | | | | |

TABLE 25

INTERCORRELATIONS OF CHANGES
(OVERALL, WITHIN SESSION, AND POST SESSION)

| F SCALE | | IN SESSION | POST SESSION |
|---|---|---|---|
| OVERALL | | .32 | .64 |
| IN SESSION | | | -.53 |
| | INTERPERSONAL CHECKLIST | | |
| AP | Overall | .39 | .62 |
| | In Session | | -.48 |
| BC | Overall | .36 | .70 |
| | In Session | | -.42 |
| DE | Overall | .47 | .66 |
| | In Session | | -.35 |
| FG | Overall | .54 | .66 |
| | In Session | | -.27 |
| HI | Overall | .53 | .61 |
| | In Session | | -.35 |
| JK | Overall | .34 | .56 |
| | In Session | | -.59 |
| LM | Overall | .52 | .59 |
| | In Session | | -.38 |
| NO | Overall | .41 | .59 |
| | In Session | | -.49 |

FIGURE 4: DIRECTION OF CHANGES IN F SCALE SCORES WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| WITHIN SESSION \ BETWEEN | - | 0 | + | |
|---|---|---|---|---|
| + | + 11 / - 28 | 0 | 8 | 47 |
| 0 | 1 | 0 | 1 | 2 |
| - | 21 | 0 | + 12 / - 10 / 1 | 44 |
| | 61 | 0 | 32 | 93 |
| Number Changing | | | | |

Overall: + 32
0 1
- 60

Note: The two diagonal cells (+ - and - +) show those individuals who showed both increases and decreases in score over the three testings. Those above the diagonal line had overall changes in score that were positive and those below had overall changes in a negative direction. One subject (lower right cell) had equal increases and decreases to have an overall change of zero.

FIGURE 5 : RESULTS OF PREDICTION
OF OVERALL CHANGES IN F SCALE SCORES

MULTIPLE R = .68 STANDARD ERROR OF ESTIMATE = 12.83

| | VARIABLES | COEFFICIENTS (BETA) |
|---|---|---|
| 1. | F Pretest | -.49 |
| 2. | Income | -1.99 |
| 3. | Number of Professional Years | .51 |
| 4. | Sex | -5.04 |
| 5. | Number of College Years | -3.36 |
| 6. | Marital Status | -4.23 |

CONSTANT = 68.20

| | | PREDICTED | | |
|---|---|---|---|---|
| DIRECTION | | - | + | |
| REAL | + | 13 | 19 | 32 |
| | 0 | 1 | 0 | 1 |
| | - | 54 | 6 | 60 |
| | | | | 93 |

CORRECT PREDICTIONS: 54 of 60 who decreased
19 of 32 who increased

73 of 92 who changed
73 of 93 overall

FIGURE 6 : DIRECTION OF CHANGES IN SCALE AP
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| WITHIN SESSION \ BETWEEN | − | 0 | + | |
|---|---|---|---|---|
| + | − + 5 / 16 8 | 4 | 4 | 37 |
| 0 | 8 | 3 | 7 | 18 |
| − | 8 | 9 | + 7 / 9 5 | 38 |
| Number Changing | 45 | 16 | 32 | 93 |

Overall + 27
0 16
− 50

FIGURE 7 : DIRECTION OF CHANGES IN SCALE BC
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| | | BETWEEN | | | |
|---|---|---|---|---|---|
| Direction | | - | 0 | + | |
| WITHIN SESSION | + | + - 5 9 4 | 7 | 6 | 31 |
| | 0 | 11 | 5 | 7 | 23 |
| | - | 7 | 10 | + - 7 7 8 | 39 |
| | | 36 | 22 | 35 | 93 |
| Number Changing | | | | | |

| | | |
|---|---|---|
| Overall | + | 32 |
| | 0 | 17 |
| | - | 44 |

FIGURE 8 : DIRECTION OF CHANGES IN SCALE DE WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| WITHIN SESSION \ BETWEEN | − | 0 | + | |
|---|---|---|---|---|
| + | − + 5 / 10 6 | 2 | 6 | 29 |
| 0 | 10 | 5 | 7 | 22 |
| − | 14 | 6 | + 8 / − 6 8 | 42 |
| Number Changing | 45 | 13 | 35 | 93 |

Overall
+ 28
0 19
− 46

FIGURE 9 : DIRECTION OF CHANGES IN SCALE FG
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

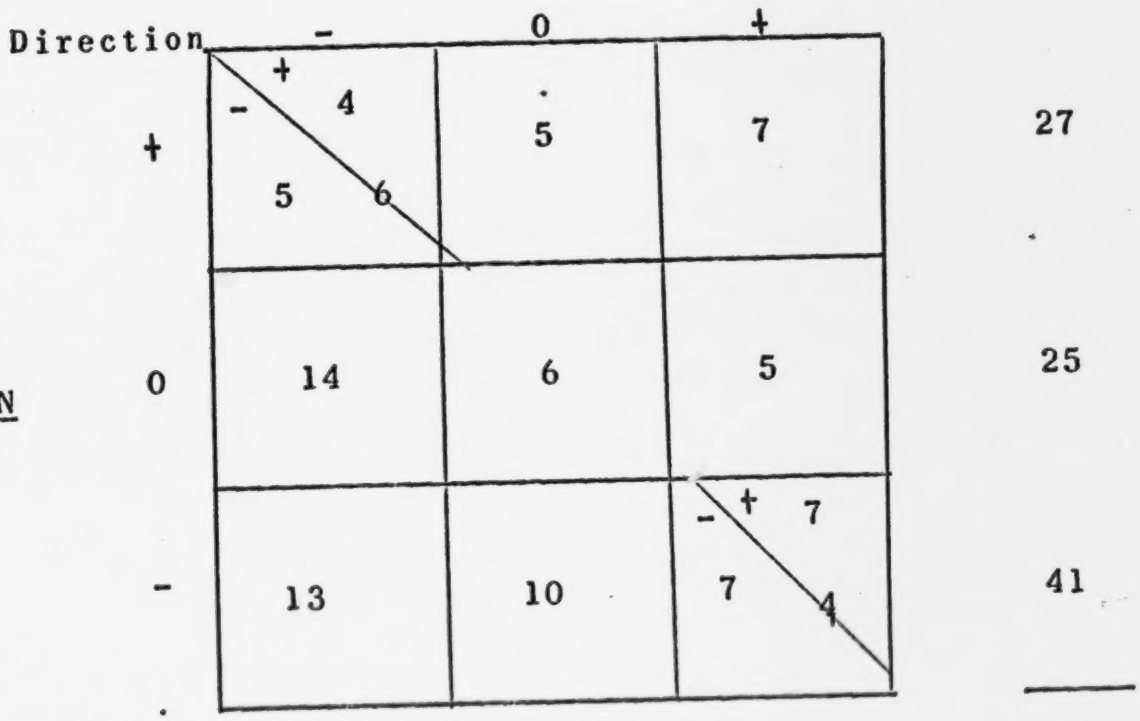


FIGURE 10: DIRECTION OF CHANGES IN SCALE HI
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| | | BETWEEN | | | |
|---|---|---|---|---|---|
| | Direction | - | 0 | + | |
| WITHIN SESSION | + | - 16 / + 7 / 7 | 1 | 4 | 35 |
| | 0 | 8 | 4 | 3 | 15 |
| | - | 14 | 9 | - 9 / + 4 / 7 | 43 |
| | Number Changing | 52 | 14 | 27 | 93 |

| | | |
|---|---|---|
| Overall | + | 19 |
| | 0 | 18 |
| | - | 56 |

FIGURE 11: DIRECTION OF CHANGES IN SCALE JK
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| | | BETWEEN | | | |
|---|---|---|---|---|---|
| Direction | | − | 0 | + | |
| WITHIN SESSION | + | − + 18 2 6 | 3 | 3 | 32 |
| | 0 | 12 | 4 | 4 | 20 |
| | − | 12 | 12 | − + 10 4 3 | 41 |
| | | 50 | 19 | 24 | 93 |
| Number Changing | | | | | |

| | | |
|---|---|---|
| Overall | + | 16 |
| | 0 | 13 |
| | − | 64 |

FIGURE 12 : DIRECTION OF CHANGES IN SCALE LM
WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| WITHIN SESSION Direction | BETWEEN − | BETWEEN 0 | BETWEEN + | |
|---|---|---|---|---|
| + | + 9 / − 13 / 8 | 4 | 6 | 40 |
| 0 | 10 | 4 | 4 | 18 |
| − | 13 | 5 | + 5 / − 7 / 5 | 35 |
| Number Changing | 53 | 13 | 27 | 93 |

Overall + 28
0 17
− 48

FIGURE 13: DIRECTION OF CHANGES IN SCALE NO WITHIN SESSION AND DURING FOLLOW UP (BETWEEN) PERIOD

| | | BETWEEN | | | |
|---|---|---|---|---|---|
| | Direction | - | 0 | + | |
| WITHIN SESSION | + | - + 6 12 4 | 5 | 5 | 32 |
| | 0 | 11 | 2 | 3 | 16 |
| | - | 20 | 3 | - + 7 10 5 | 45 |
| | | 53 | 10 | 30 | 93 |
| Number Changing | | | | | |
| Overall | + | 26 | | | |
| | 0 | 11 | | | |
| | - | 56 | | | |

FIGURE 14: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE AP

MULTIPLE R = .57 STANDARD ERROR OF ESTIMATE = 2.15

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. AP Pretest | -.43 |
| 2. Group | 1.20 |
| 3. Number of College Years | -.84 |
| 4. Number of Non Teaching Years | .06 |

CONSTANT = 4.02

| | | PREDICTED | | |
|---|---|---|---|---|
| Direction | | - | + | |
| REAL | + | 12 | 15 | 27 |
| | 0 | 9 | 7 | 16 |
| | - | 41 | 9 | 50 |
| | | | | 93 |

CORRECT PREDICTIONS: 41 of 50 who decreased
15 of 27 who increased

56 of 77 who changed
56 of 93 overall

FIGURE 15: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE BC

MULTIPLE R = .53 STANDARD ERROR OF ESTIMATE = 2.19

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. BC Pretest | -.57 |
| 2. Group | 1.36 |
| 3. Number of Non Teaching Years | .08 |

CONSTANT = 2.21

| | | PREDICTED | | |
|---|---|---|---|---|
| Direction | | - | + | |
| | + | 13 | 19 | 32 |
| REAL | 0 | 6 | 11 | 17 |
| | - | 34 | 10 | 44 |
| | | | | 93 |

CORRECT PREDICTIONS: 34 of 44 who decreased
19 of 32 who decreased

53 of 76 who changed
53 of 93 overall

FIGURE 16 : RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE DE

MULTIPLE R = ,61 STANDARD ERROR OF ESTIMATE = 2.00

| | VARIABLES | COEFFICIENTS (BETA) |
|---|---|---|
| 1, | DE Pretest | -.48 |
| 2, | Group | .96 |
| 3, | Supplemental Salary | 1.10 |
| 4, | Number of Professional Years | .03 |
| 5, | Number of CollegesYears | -.62 |
| 6, | Number of Non Teaching Years | .05 |

CONSTANT = 3.62

| | | PREDICTED | | |
|---|---|---|---|---|
| | Direction | - | + | |
| | + | 11 | 17 | 28 |
| REAL | 0 | 9 | 10 | 19 |
| | - | 39 | 7 | 46 |
| | | | | 93 |

CORRECT PREDICTIONS: 39 of 46 who decreased
17 of 28 who increased

56 of 74 who changed
56 of 93 overall

FIGURE 17: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE FG

MULTIPLE R = .59 STANDARD ERROR OF ESTIMATE = 1.82

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. FG Pretest | -.58 |
| 2. Supplemental Salary | -.81 |
| 3. Number of Dependents | .29 |
| 4. Number of Professional Years | .02 |

CONSTANT = 1.23

| | | PREDICTED | | |
|---|---|---|---|---|
| Direction | | - | + | |
| REAL | + | 10 | 18 | 28 |
| | 0 | 10 | 6 | 16 |
| | - | 41 | 8 | 49 |
| | | | | 93 |

CORRECT PREDICTIONS: 41 of 49 who decreased
18 of 28 who increased

59 of 77 who changed
59 of 93 overall

FIGURE 18: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE HI

MULTIPLE R = .70 STANDARD ERROR OF ESTIMATE = 2.03

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. HI Pretest | -.45 |
| 2. Number of Professional Years | .04 |
| 3. Sex | -1.81 |
| 4. Number of Non Teaching Years | .09 |
| 5. Group | .72 |
| 6. Population | -.06 |
| 7. Supplemental Salary | .66 |
| CONSTANT = .90 | |

PREDICTED

| | Direction | - | + | |
|---|---|---|---|---|
| | + | 7 | 12 | 19 |
| REAL | 0 | 10 | 8 | 18 |
| | - | 52 | 4 | 56 |
| | | | | 93 |

CORRECT PREDICTIONS: 52 of 56 who decreased
12 of 19 who increased

64 of 75 who changed
64 of 93 overall

FIGURE 19: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE JK

MULTIPLE R = .63 STANDARD ERROR OF ESTIMATE = 1.69

| | VARIABLES | COEFFICIENTS (BETA) |
|---|---|---|
| 1. | JK Pretest | -.34 |
| 2. | Number of Professional Years | .03 |
| 3. | Sex | -2.05 |
| 4. | Number of Non Teaching Years | .11 |
| 5. | Supplemental Salary | 1.02 |
| 6. | Group | .63 |
| 7. | Marital Status | .68 |
| 8. | Income | .12 |

CONSTANT = -.51

| | | PREDICTED | | |
|---|---|---|---|---|
| | Direction | - | + | |
| | + | 11 | 5 | 16 |
| REAL | 0 | 11 | 2 | 13 |
| | - | 58 | 6 | 64 |
| | | | | 93 |

CORRECT PREDICTIONS: 58 of 64 who decreased
5 of 16 who increased

63 of 80 who changed
63 of 93 overall

FIGURE 20: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE LM

MULTIPLE R = .62 STANDARD ERROR OF ESTIMATE = 2.38

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. LM Pretest | -.52 |
| 2. Number of Professional Years | .03 |
| 3. Number of Non Teaching Years | .08 |
| 4. Sex | -1.19 |
| 5. Supplemental Salary | .75 |
| CONSTANT = 2.95 | |

| | | PREDICTED | | |
|---|---|---|---|---|
| Direction | | - | + | |
| REAL | + | 10 | 18 | 28 |
| | 0 | 10 | 7 | 17 |
| | - | 42 | 6 | 48 |
| | | | | 93 |

CORRECT PREDICTIONS: 42 of 48 who decreased
18 of 28 who increased

60 of 76 who changed
60 of 93 overall

FIGURE 21: RESULTS OF PREDICTION
OF OVERALL CHANGES IN SCALE NO

MULTIPLE R = .43 STANDARD ERROR OF ESTIMATE = 2.55

| VARIABLES | COEFFICIENTS (BETA) |
|---|---|
| 1. NO Pretest | -.37 |
| 2. Sex | -1.30 |
| 3. Population | -.07 |
| 4. Income | .18 |

CONSTANT = 1.78

PREDICTED

| Direction | | - | + | |
|---|---|---|---|---|
| | + | 18 | 8 | 26 |
| REAL | 0 | 7 | 4 | 11 |
| | - | 52 | 4 | 56 |
| | | | | 93 |

CORRECT PREDICTIONS: 52 of 56 who decreased
8 of 26 who increased

60 of 82 who changed
60 of 93 overall

TABLE 26

FREQUENCY OF OCCURRENCE OF PREDICTOR VARIABLES
IN MULTIPLE REGRESSION EQUATIONS
FOR THE LEARY INTERPERSONAL CHECKLIST
AND DIRECTION OF WEIGHT

| | VARIABLES | OVERALL | WITHIN SESSION | POST SESSION |
|---|---|---|---|---|
| 1. | Age | | | +++++ |
| 2. | Marital Status | + | ++ | - |
| 3. | Sex | ---- | ---- | +- |
| 4. | Professional Years | +++++ | | +++- |
| 5. | Teaching Years | | | |
| 6. | Non Teaching Years (Administrative) | ++++++ | +++ | ++ |
| 7. | College Years | -- | +++- | ---- |
| 8. | Income | ++ | ---- | +++ |
| 9. | Number of Dependents | + | | |
| 10. | Population of Town | -- | - | - |
| 11. | Supplemental Salary | +-+++ | ++++++ | --- |
| 12. | Group | +++++ | - | +++++ |
| 13. | Pretest Raw Score | -------- | -------- | ------- |

## FACTOR ANALYSIS

It has been mentioned earlier that the changes observed as a result of the administration of the POI took place immediately after the two week training period. As compared to this, the changes observed on the basis of the Leary Interpersonal Checklist were evidenced between the first and the third testing, i.e. were noticable six months after training.

These results can be interpreted by saying that different kinds of behaviors are changed as a result of exposition to Human Relations Training. In order to gain more definitive knowledge of these behaviors, it was decided to factor analyze the pretest scores of all the subscales of the POI and the Leary Interpersonal Checklist.

Thurstone's (17, 18) centroid method of factoring using orthogonal rotations was used. A twelve factor solution was obtained. Table 27 on page 74 lists the factor loadings of the four main factors obtained by this analysis. The rest of the factors obtained will not be listed here, as their factor loadings are very low and hence are considered unimportant.

The four factors reported in Table 27 page 74 can be interpreted as follows:

FACTOR A: It will be noticed that seven POI subscales (listed on Table 27 ) have high loadings on this factor. It seems that there is a common personality trait which is responsible for one's time competence, existentiality, feeling reactivity, self-acceptance, acceptance of aggression, capacity for intimate contact and a health balance between inner directedness and other directedness as defined by Shostrom ( 12 ). All the personality characteristics mentioned in this paragraph are attributes of self-actualization according to Shostrom and hence Factor A might be called a factor of self-actualization. It seems that behavior which characterizes this trait changes as a result of Human Relations Training immediately after exposition to such a training.

FACTOR B: We notice that the Leary Interpersonal Checklist scales have high factor loadings on this scale. The HI scale has a loading of .59768, the JK scale has a loading of .73504, the LM scale has a loading of .63124 and the NO scale has a loading of .59327. According to the Interpersonal Diagnosis Multilevel Personality Pattern of Leary ( 7 ), these subscales are close together in the circle describing the personality configuration.

This factor can be interpreted by saying that there seems to be a common personality trait which is responsible for a person being self-effacing and masochistic, and his being docile, dependent and a clinging vine. Strangely enough, the same personality trait seems to be responsible for a person's being too cooperative and overconventional. The same trait seems to be responsible for a person who spoils others with kindness, is too willing to give to others and one who is overprotective of others and is generous to a fault. It seems that the kinds of behavior mentioned above are modified not immediately after Human Relations Training (like Factor A) but a change in them is noticed after a lapse of time (i.e. approximately six months).

FACTOR C: It is evident from Table 27 that two subscales of the POI get high factor loadings on this factor, namely $T_C$ and $T_I$.

This factor can be interpreted by saying that the Time Ratio (page 15, 12 ) as defined by Shostrom is dependent on a personality trait which has little in common with the kinds of behaviors described under Factor A above. Since Time Ratio is quite important in the concept of self-actualization, it can be said that this factor represents another facet of self-actualization which is not related to Factor A. The kinds of behavior assessed by this factor is modified immediately after Human Relations Training.

FACTOR D: Leary's AP subscale has a loading of .52055 on this factor, and we also notice that the POI SAV subscale has a factor loading of .60042; POI Sr subscale has a factor loading of .55889 and the POI Sy subscale has a factor loading of .52078.

It seems that there is a personality trait which is present in a person being managerial-autocratic (pg 35); and the same trait seems to be responsible for a person's synergy, self-regard and self-actualizing value (pg 18). In other words, there seems to be a basic personality characteristic which operates in a person's being a good and forceful leader, and this characteristic seems to play a part in a person's ability to like oneself because of one's strength as a person; and a person's ability to hold and live by values of self-actualizing people and his ability to see opposites of life as meaningfully related. Again this factor seems to be measuring another facet of self-actualization. Some of the behaviors assessed by this factor (subscales AP and Sr) seem to change as a result of Human Relations Training after a lapse of time as compared to Factor A where behavior changes were noticed immediately after the end of training.

TABLE 27

RELEVANT FACTOR LOADINGS OF POI AND LEARY INTERPERSONAL CHECKLIST SUBSCALES

| FACTOR A | | FACTOR B | | FACTOR C | | FACTOR D | |
|---|---|---|---|---|---|---|---|
| VARIABLE | LOADING | VARIABLE | LOADING | VARIABLE | LOADING | VARIABLE | LOADING |
| POI-I Scale | .81164 | Leary-HI Scale | .59768 | POI-$T_C$ Scale | .84151 | Leary-AP Scale | .52055 |
| POI-Ex Scale | .72489 | Leary-JK Scale | .73504 | POI-$T_I$ Scale | .82331 | POI-Sav Scale | .60042 |
| POI-Fr Scale | .70437 | Leary-LM Scale | .63124 | | | POI-Sr Scale | .55889 |
| POI-Sa Scale | .54970 | Leary-NO Scale | .59327 | | | POI-Sy Scale | .52078 |
| POI-A Scale | .61585 | | | | | | |
| POI-C Scale | .70150 | | | | | | |
| POI-O Scale | .80731 | | | | | | |

*This Table gives factor loadings whose value is above .5. Factor loadings less than .5 have not been included.

5. Motivation Analysis Test

The Motivation Analysis Test (henceforth, MAT) has been developed by Cattell ( 3 ) and has been used extensively in education research (843). MAT concentrates on ten psychologically meaningful unitary motivation systems, established by comprehensive and objective factor analytic research. According to Cattell ( 4 ), the ten dynamic structures in MAT were chosen carefully to give the most dynamically, clinically useful measures among the roughly twenty dynamic factors which research to date has established to be representative and comprehensive in coverage of adult motivation. Five of the dimensions are basic drives (technically ergs), and five are sentiment structures. Cattell uses the term erg instead of drives because the latter term drags in all manners of clinical and other assumptions about "instincts" etc.; whereas ergic patterns according to Cattell are experimentally demonstrable. In popular terms an erg is a drive or a source of reactive energy directed towards a particular goal, such as fear, mating, assertiveness, etc. By contrast a sentiment is an acquired aggregate of attitudes, built up by learning and social experience, but also like an erg, a source of motivation and interest. Both ergs and sentiments, though essentially common in form, are developed to different degrees in different people. Table 28 briefly describes the ergs and sentiments that are measured by MAT.

TABLE 28

THE TEN DYNAMIC STRUCTURES MEASURED IN MAT

| | Title | Symbol on the Records | Brief Description |
|---|---|---|---|
| ERGS (Drives) | Mating Erg | (Ma) | Strength of the normal, heterosexual or mating drive. |
| | Assertiveness Erg | (As) | Strength of the drive of self-assertion, mastery, and achievement. |
| | Fear (Escape) Erg | (Fr) | Level of alertness to external dangers [This is not anxiety; see (34) and p. 22] |
| | Narcism-comfort Erg | (Na) | Level of drive to sensuous, indulgent satisfactions. |
| | Pugnacity-sadism Erg | (Pg) | Strength of destructive, hostile impulses. |
| SENTIMENTS | Self-concept Sentiment | (SS) | Level of concern about the self-concept, social repute, and more remote rewards. |
| | Superego Sentiment | (SE) | Strength of development of conscience. |
| | Career Sentiment | (Ca) | Amount of development of interests in a career. |
| | Sweetheart-spouse Sentiment | (Sw) | Strength of attachment to wife (husband) or sweetheart. |
| | Home-parental Sentiment | (Ho) | Strength of attitudes attaching to the parental home. |

MAT data was analyzed to answer the following questions:

1. Are the experimental group changes significantly different than the control group changes?

2. What role do the following variables play in MAT changes in the experimental group:

   a. Age
   b. Sex
   c. Marital Status
   d. Years of Teaching
   e. Years in Profession
   f. Income
   g. Church Affiliation
   h. Type of Group, i.e., a typical T-group vs. a back home group

The results of this analysis will be presented with reference to the above questions.

A comparison of pretest MAT scores of the experimental and control groups indicated that the difference between these two groups were not significant; hence, they can be considered comparable.

An analysis of variance was undertaken to study the differences between the first and the third testings of the experimental group. This analysis endeavored to find out if the change scores (between the first and the third testings) discriminated between the experimental and control subjects.

The overall F ratio as a result of this analysis is 2.3606 which is significant at better than the .01 level. This indicates that as a result of exposition to Human Relations Training the experimental group changed significantly as compared to the control group.

The F ratio for changes in the Career Sentiment between the experimental and the control group was 10.36 which is significant at better than the .01 level. This would imply that the experimental group developed more interests in their career both at a conscious and unconscious level (as measured by MAT) as a result of their exposition to Human Relations Training.

The F ratio for a similar change for the Superego Sentiment is 3.33 which is significant at the .05 level. This can be interpreted by saying that the experimental group developed their strength of conscious as a result of the Human Relations Training.

The F ratio for change in Self Concept Sentiment was 4.37 which is significant at better than the .05 level. This implies that the experimental group developed more concern for their self and became more sensitive to remote rewards.

The F ratio for Pugnacity-Sadism Erg was 4.54 which is significant at better than the 5% level. This can be interpreted by saying that the Human Relations Training resulted in the lessening of the destructive, hostile impulses in the experimental group.

The F ratio (5.90) was significant at the 2% level of confidence for Assertiveness Erg. This can be interpreted by saying that the experimental group became more self-assertive and achievement oriented as a result of exposition to Human Relations Training.

The following conclusions can be drawn from the analysis of variance that was completed to study the effects of Human Relations Training on the variables measured by MAT in terms of sex. All the changes studied were between the first and third testing for the experimental group.

1. It seems that all members become less oriented towards home and parents as a result of the training experience, but men do so more than women. The F ratio for sex difference is 2.02 which is significant at better than the .05 level.

This change in orientation seems to occur at the unintegrated (unconscious) level as measured by MAT (pg3,3). Due to the very powerful group norms in a T-group, this change in orientation is not surprising to the present writer. It is of interest to note that it seems to persist months after the intensive training (third testing was done after six months of the two week intensive training).

2. Men seem to become more narcissistic as a result of exposition the Human Relations Training. The F ratio in this context was 8.62 which is significant at better than the .01 level. This finding can be interpreted by saying that narcissism probably goes hand in hand with increased self insight which results in most Human Relations Training situations.

3. Interestingly enough, women seem to become less superego oriented than men. The F ratio for unintegrated superego changes was 2.61 which is significant at better than the .05 level.

4. Men become more spouse-sweetheart oriented as a result of exposition to Human Relations Training. The F ratio for Sweetheart-Spouse Sentiment (pg.76) was 4.45 which is significant at better than the .05 level.

5. It seems that men become more career oriented (F = 3.30) than women as a result of training.

The following conclusions are of interest so far as marital status and MAT changes for the experimental group (between the first and third testings) are concerned.

1. Married persons seemed to decrease in their career interest as measured by the changes in Career Sentiment (pg. 76). The F ratio was 5.67 which is significant at better than the .05 level.

2. Spouse-sweetheart interest increased in married persons as compared to nonmarried persons (F ratio = 4.37 - significant at better than the .05 level).

The following conclusions can be drawn about the role of age and MAT changes.

1. Older persons seem to become less narcissistic than younger ones (F ratio = 8.62 - significant at better than the .01 level).

2. Self Sentiment changes are less in older persons than in younger ones (F ratio = 8.00 - significant at better than the .01 level).

3. Mating (pg. 76) increases less in the older person (F = 3.17 - significant at better than the .05 level).

4. Interestingly enough, older persons become more pugnacious (F for Pugnacity-Sadism Erg = 5.10 - significant at better than the .01 level).

5. Home Parental Sentiment (pg. 76) decreases more among older persons (F ratio = 10.61 - significant at better than the .01 level).

As regards the number of years of teaching experience, the following results are of interest.

1. Persons who have taught longer increase in Narcism-Comfort Erg (pg 76) least. The F ratio for this was 8.51 which is significant at better than the .01 level of confidence.

2. Pugnacity-Sadism Erg (pg 76) increases in those with longer teaching experience as a result of their exposition to the Human Relations Training program. The F ratio obtained was 8.166 which is significant at better than the .01 level.

3. The strength of Home-Parental Sentiment (pg 76) decreases more in those persons who have taught longer. The F ratio obtained was 8.247.

4. Fear Erg (pg 76) decreases more in persons who have taught longer. This difference was significant at the 5% level (F ratio = 2.20).

5. Persons with longer teaching experience become more assertive. The F ratio value was 2.218 which is significant at the 5% level of confidence.

The relationships of years in profession to MAT changes are similar to the relationships described above with respect to number of years of teaching experience.

MAT changes do not seem to relate to income level. Similarly, church affiliation does not seem to have any consistent relationship to MAT changes in the present analysis.

As regards the type of group to which a person belongs, the following conclusions can be drawn from the present analysis.

It seems that as a result of Human Relations Training, groups that were composed of persons who had known each other prior to the start of the training developed a greater interest in their careers (F ratio for career change was 2.58 which is significant at the 5% level) as compared to groups that were composed of persons who did not know each other before the start of the training.

Persons in "back home" groups gained more in Self Sentiment. The F ratio in this case was 2.76 which is significant at better than the .05 level.

It is interesting to note that persons in a typical T-group (i.e. a group composed of strangers) became more assertive than persons in the "back home" group. The F ratio in this case was 3.87 which is significant at better than the .05 level. It can be hypothesized that the relative anonymity afforded by a typical

T-group probably gives an individual a greater chance to exercise self-assertion as compared to a group situation where one is well-known to others and where one's role in the group has been structured before one comes into the group.

## EXTERNAL CRITERIA

1. Ratings by Principals

Ryan's (11) characteristics of Teachers Rating Scale was used to get ratings by principals of two groups of teachers. One group (called the experimental group) was comprised of teachers who had been exposed to Human Relations Training. The other group of teachers (called the control group) were those individuals who were comparable to the experimental group but were not exposed to Human Relations Training.

In application, the Characteristics of Teachers Rating Scale resulted in difficulties as far as the statistical analysis was concerned. Designed as a forced choice instrument in which the rater was to check either a positive or negative statement about the teacher being rated, the results showed that the raters were extremely reluctant to check the negative items of the scale and left many items blank. This caused the analysis to be somewhat indirect in that all subjects were not rated on exactly the same number of items. For the positive statements the difference between the experimental and control groups was significant at 10% level. This would indicate that there is a tendency for the teachers exposed to Human Relations Training to be viewed positively by the principals. There was no difference between the experimental and control groups so far as the negative statements are concerned. A significant difference ($p < .01$) was found in the number of blanks per questionnaire, with the experimental group receiving fewer blank ratings. Table 29 (page 94) gives details of this analysis.

These results may have resulted from several sources, e.g. a bias of the raters in favor of teachers known to have been in a training program, or on the other hand, a greater ease in rating the experimental group.

An additional analysis of the results accounting for the unequal numbers of items for each subject was performed by analyzing the results item by item in terms of which group has the higher percentage of members checked positively for a given item. This analysis showed that on twenty of the twenty-five items, a higher percentage of the experimental group was checked positively. Table 34 and Figure 22 (page 97) give details of this analysis. This difference was found statistically significant ($p < .001$), using the Sign test (13), suggesting that indeed the experimental group as a whole was rated more favorably by their immediate supervisors.

The implication of these findings seems to be that teachers exposed to Human Relations Training are viewed more positively by their principals and supervisors.

TABLE 29

Principals' Ratings of
Teachers Characteristics

| | EXPERIMENTAL GROUP | SIGNIFICANCE OF DIFFERENCES | CONTROL GROUP |
|---|---|---|---|
| No. | 107 | | 55 |
| No. Positive Statements | Mean - 19.36<br>S.D. - 5.49 | NS<br>$p < .10$ | 16.96<br>6.56 |
| No. Negative Statements | Mean - 2.20<br>S.D. - 3.18 | NS | 2.42<br>4.10 |
| No. Blank Items | Mean - 3.39<br>S.D. - 4.29 | $p < .01$ | 5.66<br>4.28 |

TABLE 30

Item Analysis of Principals Rating of Teachers, Per Cents of Teachers Receiving Positive Ratings

| ITEM | EXPERIMENTAL GROUP PER CENT POSITIVE | CONTROL GROUP PER CENT POSITIVE | SIGN OF DIFF |
|---|---|---|---|
| 1 | 83 | 82 | + |
| 2 | 94 | 82 | + |
| 3 | 80 | 60 | + |
| 4 | 72 | 78 | - |
| 5 | 73 | 53 | + |
| 6 | 64 | 49 | + |
| 7 | 87 | 93 | - |
| 8 | 83 | 78 | + |
| 9 | 84 | 84 | 0 |
| 10 | 90 | 87 | + |
| 11 | 76 | 76 | 0 |
| 12 | 85 | 69 | + |
| 13 | 81 | 71 | + |
| 14 | 52 | 58 | - |
| 15 | 91 | 84 | + |
| 16 | 67 | 56 | + |
| 17 | 79 | 44 | + |
| 18 | 73 | 53 | + |
| 19 | 73 | 45 | + |
| 20 | 69 | 49 | + |
| 21 | 76 | 67 | + |
| 22 | 71 | 55 | + |
| 23 | 75 | 69 | + |
| 24 | 89 | 85 | + |
| 25 | 68 | 65 | + |

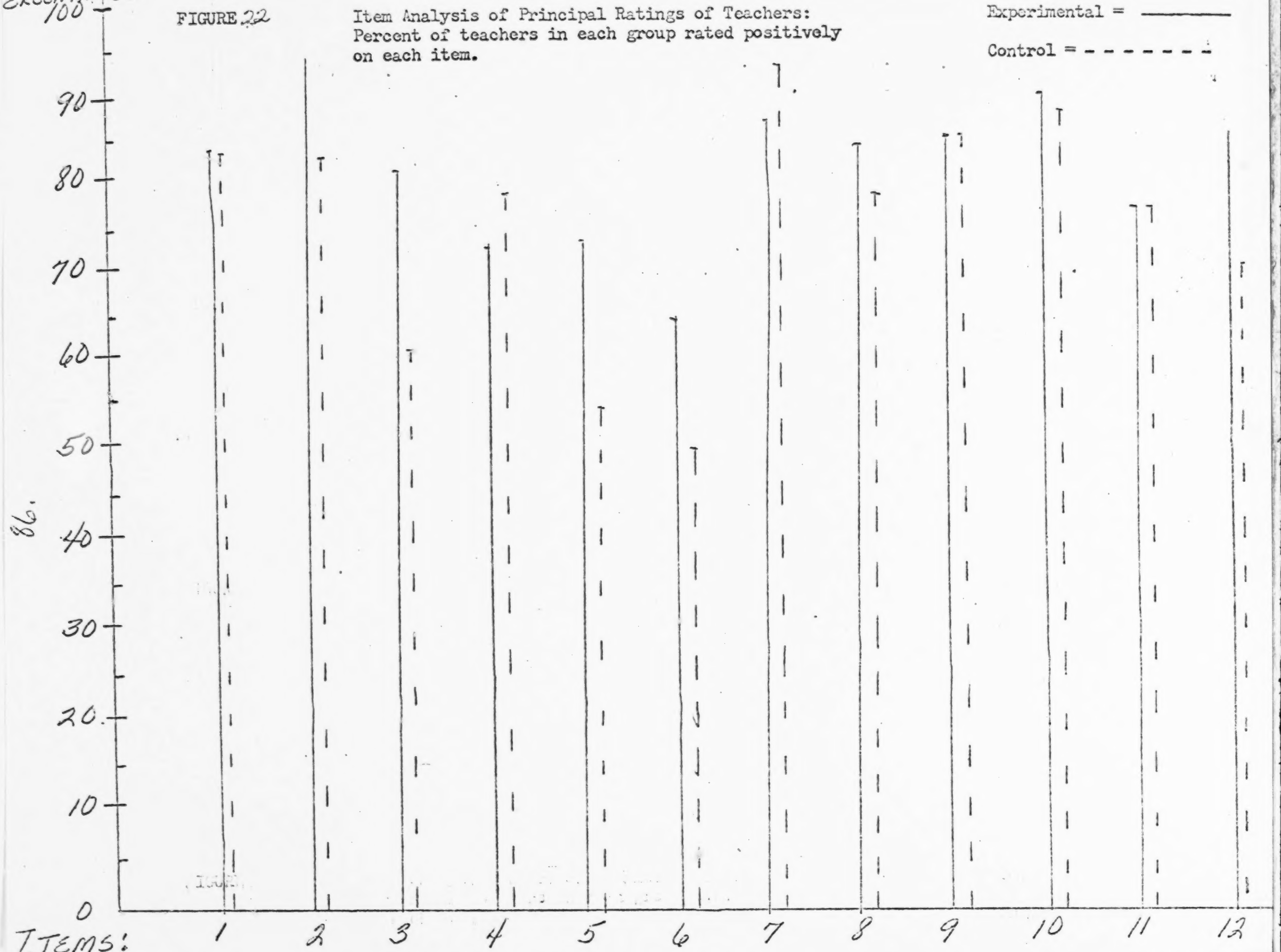
Sign test 20+, 3-, $p < .001$

FIGURE 22

Item Analysis of Principal Ratings of Teachers: Percent of teachers in each group rated positively on each item.

Experimental = ————

Control = - - - - - - -



13 14 15 16 17 18 19 20 21 22 23 24 25

2. The Picture Test

One of the external criterion measures to assess the effectiveness of the Human Relations Training was a test given to the students taught by teachers who had undergone the training. A group of students similar in background and age, etc., was used as a control group.

The students examined were 110 in all. Sixty of these students had been taught by teachers who had been through the Human Relations Training and fifty of those who had not been through such training. The sixty students that comprised the experimental group consisted of eleventh and twelfth graders, 32 males and 28 females. Their ages ranged from 17 to 20. The control group similarly consisted of twelfth graders, 50 in all, 22 of whom were male and 28 female. Their age range also was from 17 to 20. The students came from similar socio-economic backgrounds and from school districts which were regarded as constituting similar groups in terms of most major dimensions.

The test consisted of six pictures, five of these chosen from the Michigan Picture Test ( 2 ) and one from the Thematic Apperception Test ( 9 ). The first picture depicted a classroom scene of a boy standing next to the teacher's desk with the teacher in her chair and other children in the classroom. The second picture depicted a boy standing beside a desk behind which an older man sat. The third picture depicted a girl sitting alone in an otherwise vacant classroom. The fourth picture depicted four figures in the middle of the road supposedly walking down that road. A fifth picture was that of a streak of lightning in the sky during the dark night with houselights and other clues of a town. The last picture was a blank card from the Thematic Apperception Test ( 9 ). The instructions given were those used for the Thematic Apperception Test ( 9 ), namely that the students had to write stories centering around the pictures and state the present, the past, the future and the feelings of the characters in the story.

The responses to these cards were examined in order to get an assessment of the students' attitudes towards the school situation as such. More specifically, assessment was made of the students' perception of themselves in their interaction with their teachers, their perception of the teachers, their general attitude towards the school and their attitudes towards their own role within the context of the school situation. It was felt that the blank card mentioned above gave indication of the general attitude of the student towards the school, their teacher, the testing situation as such and was symbolic of the student's overall reaction to their general role as a student. Most of these assessments will be discussed below.

The responses of the students were examined at great length in order to get some idea of how the students perceive themselves within the context of the school situation. The pictures invariably brought out the theme of a school in progress. The classroom situation depicted in Card 1, the second Card which almost invariably brought the theme of the principal and the student, Card lll which depicted the child alone in a classroom as well as Card lV with the students walking down, in almost all cases with very few exceptions, brought forth themes related to school life. The last two cards sometimes did the same thing indirectly. On the basis of these responses the contents of the themes presented were analyzed and a frequency count made of the number of times a theme was expressed as an indication of the student's perception of his own role. As Table 31 indicates, there is a marked difference between the two groups. Whereas 70% of the experimental group consisting of a total of sixty students perceived the student's role as being positive only 32% of the control group with its total of fifty did so. This implied that the students saw themselves as learning, trying to understand, expressing some sense of adequacy as well as a sense of importance about what they did. These responses ranged from the student's perception of indulging in activities of learning, etc., to an expression of their own adequacy and wish for improving themselves. Card lll depicting the adult man with a smaller child was almost invariably seen as a case of some deviant behavior on the child's part. Both the control and the experimental groups tended to perceive this as a case of a child faced with having violated some rule of the school. The difference is marked in the reaction of the students to the situation and gave an indication of how they deal with it. 68% of the experimental group felt that the hero had done something wrong but that the future would bring forth a correction of this misdeed usually through punishment or related intermediate methods used by the authority concerned. As compared with this, only 26% of the control group expressed such sentiments. In these same themes the respondents expressed feelings of feeling bad, scared, or made some kind of a self-depreciatory remark. Here the differences are not as marked but still continue to be present so that 40% of the experimental group and 62% of the control group expressed these feelings. The theme of deviant behavior, as mentioned above, was perceived by 87% of the experimental group and 94% of the control group. Several students expressed the idea of either playing "hooky" or feeling revengeful, resentful and angry at the teacher. The differences here again are in the predicted direction so that 27% of the experimental group and 80% of the control group feel that such a solution is the best adjustment. The intensity of the children's negative feelings in this context are quite marked. For the control group, it took strong forms such as "hits the teacher, will get even with her someday," "the boy has been unjustly sent to the principal," "the cat (the boy) in the leather jacket may at any moment pull a knife on the guy with the tie

(teacher)," or "these children are mad at their teacher" and for the experimental group examples were of "the child's feelings are anger at her teacher," "some kid beat the heck out of her teacher," and "the boy probably tells the teacher he was a nasty old man." In spite of the specific test directions not all the students made any statement about the future but some of the respondents did so. Here again, the differences hold up though they are not as marked as the above mentioned dimensions. Thirty-six per cent of the control group felt that their future was bad or uncertain whereas only 10% of the experimental group said so. As opposed to this, 40% of the experimental group mentioned that their future was either good or to be better and only 32% of the control's said the same thing.

Linked closely with the student's perception of his own role in this context was an assessment of a general attitude of how helpless or effective a student feels. This attitude does not give the content, i.e. the helplessness is not necessarily an indication of complete compliance nor a sense of effectiveness, an indication of very positive attitudes. The attitude refers to the degree to which the student felt that he could do something about his situation or felt that he was completely at the mercy of the forces around him. The students' responses were rated along a five-point scale ranging from the extremely internally oriented to an extremely external orientation. Neither ends of the five-point scale, namely the completely internal orientation nor the completely external orientation, were present frequently. In fact only two of the students from the experimental group expressed an extremely internal orientation. These were therefore regarded as part of a tendency towards an internal orientation. The other categories were a mixed orientation and a tendency towards an external orientation. The last category, namely an extremely external orientation, was dropped from the statistical analysis since none of the respondents could be classified as such. A chi square test was run on the results of these which was significant at more than the .02 level. The experimental group as the data (Table 32.) shows tends to be more internally oriented and the control group more externally oriented. There seemed to be no difference in the groups as far as the mixed orientation, namely neither internal or external orientation, was concerned. A look at the responses suggested that some of the internal orientation also involved negative attitudes towards the teacher where the student feels that he will get even with the teacher or that he will do something to irritate her. This was more prominant in the control group than in the experimental group. As Rotter (20) has pointed out, the importance of this attitude in the general adjustment of a person in his life is extremely important. It may well be assumed that those students who feel completely at

the mercy of the social forces surrounding them, namely the school situation, are more liable to have difficulty in making affective adjustment towards life. As has been mentioned above, some of the internally oriented responses indicate antisocial behavior which is very likely to lead the student into conflict with the social forces later on, but it is apparent that if a person feels extremely helpless, there is very little he is liable to do or be able to take the responsibility for his actions since he does not see himself as emanating any effective measures on his own.

The next major dimension for which the responses were assessed was the perception of the teacher. As the Leary Checklist (pages 97 ) showed, the students had some differences in their overt perception of their teachers though generally they tended to be rather uncomplimentary. The picture test being examined here showed somewhat more marked differences especially as far as the positive perception of the teacher was concerned. The positive perception involved seeing the teacher as a source of identification where she was fulfilling her chief function of being a teacher and was helpful, understanding and supportive. A negative perception consisted of such themes as the teacher being inadequate, boring or extremely punishing. A glance at Table 33 will show that 65% of the experimental group and only 30% of the control group expressed positive feelings towards their teachers. This is markedly more so than the results of the Leary Checklist suggested, and it may be pointed out that the picture test would be a stronger indication of the kind of identifications that accrue with the teacher than the overt verbal statements which the Leary Checklist brings forth. As far as the negative sentiments were concerned, there were again very marked differences in the perceptions of the two groups; 43% of the experimental group and 92% of the control group saw the teacher as punishing, as unjustly punitive or unfair. Some of these perceptions also involved seeing the teacher as inadequate and boring in person. As mentioned above, Card 11 invariably brought forth the theme of the principal talking to a student. There were less than ten respondents who saw the older person in the picture as representing either an uncle, a warden or some other authority figure. These responses were again sorted out into positive remarks about the principal or negative remarks about the principal. The experimental group had more or less the same amount of the two kinds of responses in the two categories, that is 38% of their remarks were positive and 42% were negative. In contrast with this, the control group showed a marked preference for negative remarks towards the principal so that 66% of the group saw the principal as being extremely negative and only 22% saw the principal as being positive. The positive remarks about the principal showed an indication

of a conviction that the principal must punish the child for his own future good or he was a source of a gratifying identification in some other way. At times this was brought forth in the theme of the principal trying to help the child see right from wrong or in generally counseling him for his own good. The negative remarks consisted of the principal being "mad, unfair, and extremely punitive."

Not every student made direct references to the school. The result is that we do not have responses of every child on a direct expression of their sentiments about school but only in some cases. Here again there is a marked difference between the two groups, 10% of the experimental and only 2% of the control expressed pleasant sentiments towards the schools and saw this as a worthwhile experience. In comparison with this, 18% of the experimental and 32% of the control saw the school as something to be avoided and as generally a very unpleasant part of their life.

The last dimension to be studied was the student's reactions to the Blank Card mentioned above. Since the Card asked for the student to make a story of his own, it brought forth a range of responses which were regarded as symbolic expression of their general attitude of their own role within the school situation. The responses ranged from extreme hostility towards the examiner to an expression of the bright future which lay ahead for the students as they left the school. It was felt that the positive responses in this case were a combination of the student's perception of his role within the school situation, his general attitude about how effective his own behavior could be in shaping his life as well as his general reaction to the teacher's role and other adult figures. Some of the students gave no response to the Card as such, however, they made some remarks so that their statement could be divided into a positive statement, a negative statement or a neutral statement. The positive remarks generally state that they could not see anything but they generally had a good feeling about the Card; the negative remarks stated that they saw nothing in the picture and made some hostile comment about being asked to do such a "stupid" thing. The neutral category consisted of remarks where the student gave no indication of his feelings about the Card either positive or negative. Some of the respondents proceeded to see something which ranged from a symbolic expression of their own future to a concrete picture. These could also be classified as being generally, positive, negative or neutral. Both sets of responses to the Blank Card were combined and a chi square computed for differences between the experimental and control groups. A look at Table 3L will show that the $x^2$ differences between these categories is 24.43 and for this size sample is significant at beyond the .001 level. A look at the data shows that here again the marked differences come from the positive and negative categories which contribute most of the difference. The differences again appear to be in the predicted directions so that the

experimental group tends to give more positive remarks as opposed to the control and fewer negative remarks as opposed to the control. The highest frequency is that of the negative remarks made by the control group.

In summary then, it is apparent that the students do not form dichotomous groups. They do tend to see themselves as being involved in deviant behaviors and perceive themselves as being in the wrong within the school context. It seems that both groups when shown the picture where the child is facing an adult, tend to see deviant acts where the child has done something wrong. Since the test was given in a school situation, it had all the associations of the school attached to it. The interesting comment to be made, however, here is that the interactions with the teacher do bring forth either completely negative or constructive responses to these situations. It can therefore be stated that obviously the teachers who have been through the Human Relations Training bring forth, in at least some of the students, a sense of identification with themselves as well as a sense of constructive action being available to the students within the total school situation. Since these are high school students who are at the threshold of graduation, it may logically be assumed that their attitude towards their teachers and the school are bound to effect their attitude towards the general adult society that they enter fully after their graduation. It is also apparent that it cannot be logically assumed that the control group consisted of students only with negative reactions, but that the teachers in these situations apparently failed to bring forth a positive interaction between themselves and the students.

It is apparent that if a student has been interacting with a teacher who has been through the Human Relations Training, he is more likely to be involved with such activities as learning, studying, preparing for the future, as feeling a sense of identity with the teacher whose punishing activities he perceived as being for his own good, as seeing the future to be good and as seeing his own actions to some extent being determined by himself than if he gets a teacher who has not had such training. The student may still manage to arrive at the same point as indeed some do, but apparently his interactions with the school environment tend to reduce the possibility of his being able to do so.

TABLE 31
PERCEPTION OF SELF

| | Experimental | | | | Control | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | % | Male | Female | Total | % |
| Positive (Student Role & Adequacy) | 18 | 24 | 42 | 70% | 6 | 10 | 16 | 32% |
| Done something wrong (guilty); will correct | 20 | 21 | 41 | 68% | 4 | 9 | 13 | 26% |
| Feeling bad; scared; self-depreciatory remarks | 17 | 7 | 24 | 40% | 11 | 20 | 31 | 62% |
| Deviant behavior | 26 | 26 | 52 | 87% | 19 | 28 | 47 | 94% |
| "Laying out" Revengeful & angry at teacher | 10 | 6 | 16 | 27% | 15 | 25 | 40 | 80% |
| Future bad or uncertain | 4 | 2 | 6 | 10% | 7 | 11 | 18 | 36% |
| Future good or better | 7 | 17 | 24 | 40% | 6 | 10 | 16 | 32% |

TABLE 32

INTERNAL - EXTERNAL ORIENTATION

| | Experimental | Control | |
|---|---|---|---|
| Internal | 28 | 11 | 39 |
| Neither Internal or External | 15 | 14 | 29 |
| External | 17 | 25 | 42 |
| | 60 | 50 | 110 |

$\chi^2 = 8.07$

p .02

TABLE 33

PERCEPTION OF TEACHER

| | Experimental | | | | Control | | | |
|---|---|---|---|---|---|---|---|---|
| Teacher | Male | Female | Total | % | Male | Female | Total | % |
| Positive | 20 | 19 | 39 | 65% | 3 | 12 | 15 | 30% |
| Negative | 18 | 8 | 26 | 43% | 23 | 23 | 46 | 92% |

TABLE 34

PERCEPTION OF PRINCIPAL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Principal | | | | | | | | |
| Positive | 12 | 11 | 23 | 38% | 2 | 9 | 11 | 22% |
| Negative | 12 | 13 | 25 | 42% | 17 | 16 | 33 | 66% |

TABLE 35

PERCEPTION OF THE SCHOOL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| School | | | | | | | | |
| Pleasant | 3 | 3 | 6 | 10% | 0 | 1 | 1 | 2% |
| Unpleasant | 5 | 6 | 11 | 18% | 8 | 8 | 16 | 32% |

TABLE 36

RESPONSE TO CARD VI (BLANK CARD)

| | Experimental | Control | |
|---|---|---|---|
| Positive | 25 | 6 | 31 |
| Negative | 9 | 29 | 38 |
| Neutral | 26 | 15 | 41 |
| | 60 | 50 | |

$\chi^2 = 24.43$

p .001

3. Students Ratings of Teachers

Two comparable groups of high school students were selected for this part of the study. There were approximately 50 students in each group. One group (called the experimental group) was taught by teachers who had been exposed to Human Relations Training. The other group (called the control group) had students who were taught by teachers who had not been exposed to Human Relations Training. These two groups were asked to complete the Leary Interpersonal Checklist for themselves and for their teachers. The preliminary result of this comparison are presented below.

No significant differences were found between the two groups of students when their ratings of themselves were compared. This analysis, summarized in Table 37, was performed to insure that the two groups of raters were comparable. This allows any differences in the ratings of the teachers to be more likely related to the teachers' behavior than to biases in the samples of students.

By inspection, it can easily be seen that these students have a very uncomplementary view of teachers in general, whether they are the teachers who have had Human Relations Training or not. When the student raters' view of their teachers is compared with those teachers' view of themselves, gross discrepancies appear. (See Figure 1, 2, and 3, pages 31-33). The students seem to have in general a picture of teachers as hostile, authoritarian, rigid people with few of the saving graces of concern for others, love or modesty. This cultural stereotype (perhaps only an exaggeration of any adolescent's view of an adult authority figure) seems to pervade the ratings and to overpower the discrimination power of any given scale since no significant differences were found between the rating of the teachers of either group. (See Table 38, page 100).

However, close inspection of the mean ratings of the groups on the eight subscales (See Figure 3, page 33) shows that on the four more negative scales, the control group has higher scores and on the four more positive scales the experimental group has higher means. This observation was in the expected direction and was followed up by an analysis of the two groups using combined scores of what Leary (7) calls Dominance (Dom) and Love (Lov) derived from a differential weighting and combination of the various positive and negative subscales. This analysis is summarized in Table 39.

As can be seen from the analysis, the results are statistically significant and indicate that the teachers in the experimental group are seen as less hostile and more accepting than the control group teachers. This confirms the tendency noted in the initial analysis although the levels of the scores still indicate a very unflattering picture of teachers in general when viewed by their students. In any case, it can be surmised that teachers who have been exposed to Human Relations Training

seem to relate in a more positive manner to the students as compared to teachers who have not been exposed to such training.

TABLE 37
STUDENTS' RATINGS OF THEMSELVES
ON THE INTERPERSONAL CHECK LIST
Means and Significance Tests

| Scale | | Experimental Group | Control Group | Significance |
|---|---|---|---|---|
| AP | Mean | 4.68 | 3.84 | NS |
| | Variance | 5.32 | 6.49 | |
| BC | Mean | 4.92 | 4.47 | NS |
| | Variance | 4.46 | 5.54 | |
| DE | Mean | 4.41 | 4.20 | NS |
| | Variance | 4.47 | 6.59 | |
| FG | Mean | 4.98 | 4.92 | NS |
| | Variance | 6.30 | 9.99 | |
| HI | Mean | 5.06 | 5.20 | NS |
| | Variance | 7.05 | 7.18 | |
| JK | Mean | 5.51 | 5.59 | NS |
| | Variance | 9.36 | 9.03 | |
| LM | Mean | 7.35 | 7.12 | NS |
| | Variance | 9.85 | 8.26 | |
| NO | Mean | 5.03 | 5.00 | NS |
| | Variance | 10.28 | 11.33 | |

TABLE 38
STUDENTS' RATINGS OF TEACHERS
ON THE INTERPERSONAL CHECK LIST
Means and Significance Tests

Teacher Ratings

| Scale | | Experimental Group | Control Group | Significance |
|---|---|---|---|---|
| AP | Mean | 8.16 | 8.61 | NS |
| | Variance | 5.91 | 7.49 | |
| BC | Mean | 7.38 | 8.10 | NS |
| | Variance | 7.33 | 8.56 | |
| DE | Mean | 7.56 | 8.20 | NS |
| | Variance | 6.79 | 6.94 | |
| FG | Mean | 6.19 | 6.96 | NS |
| | Variance | 11.81 | 13.49 | |
| HI | Mean | 3.10 | 2.43 | NS |
| | Variance | 6.28 | 3.78 | |
| JK | Mean | 4.52 | 3.67 | NS |
| | Variance | 8.53 | 5.67 | |
| LM | Mean | 4.87 | 4.13 | NS |
| | Variance | 13.70 | 12.48 | |
| NO | Mean | 4.29 | 3.59 | NS |
| | Variance | 10.61 | 7.07 | |

TABLE 39
STUDENTS' RATINGS OF TEACHERS:
Dominance (DOM) and Love (LOV) Scores,**
Means and Significance Tests

Love (LOV)

| | Experimental Group | Control Group | Significance* |
|---|---|---|---|
| Mean | -5.79 | -9.52 | $p < .025$ |
| Variance | 82.83 | 110.19 | |

Dominance (DOM)

| | Experimental Group | Control Group | Significance* |
|---|---|---|---|
| Mean | 5.73 | 6.92 | $p \cong .05$ |
| Variance | 14.12 | 13.85 | |

*A one-tailed significance test was employed on both scores with the rationale that the experimental group would be higher on LOV and lower on DOM, which was confirmed.

**DOM = 0.7 (BC+NO-FG-JK) +AP-HI
LOV = 0.7 (JK+NO-BC-FG) +LM-DE

## ANALYSIS OF FEEDBACK QUESTIONNAIRE

The following conclusions can be drawn from the responses to this questionnaire:

1. 92.5% of the participants felt that they were able to express their feelings more freely towards their colleagues as a result of participating in the two weeks' training program.

2. 90.5% felt that they wer able to express their feelings more freely towards their superiors.

3. 90% felt that they were able to express their feelings more freely towards their subordinates.

4. 89% felt that they were able to express their feelings more freely towards their relatives and friends.

5. 88% felt that they could convey their thoughts and intentions more clearly.

6. 75.5% felt that they had become more sensitive to the opinions of others about them.

7. 94.1% felt that they could understand other persons' point of view better regardless of whether they agreed with them or not.

8. 93.1% felt that as a result of this experience they could make themselves understood better.

9. 96.1% felt that they could work better as a member of a group when faced with new problems.

10. 92% felt that they could clarify the nature of the problem better and also come out with more effective solutions.

All the above percentages are statistically significant. Pages 103-106 contain the detailed Tables for the above conclusions.

TABLE 40

Question : Do you feel that you are able to express your feelings more freely towards your

a. Colleagues _____yes _____no
b. Superiors _____yes _____no
c. Subordinates _____yes _____no
d. Friends and relatives _____yes _____no

| | YES | | NO | | UNANSWERED | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| A. | 126 | 92.5 | 9 | 6.5 | 1 | 1 |
| B. | 123 | 90.5 | 10 | 7.5 | 3 | 2 |
| C. | 123 | 90 | 9 | 7 | 4 | 3 |
| D. | 121 | 89 | 12 | 9 | 3 | 2 |

TABLE 41

Question 4: Do you feel that you can convey your thoughts and intentions more clearly?

_____yes _____no

| YES | | NO | |
|---|---|---|---|
| # | % | # | % |
| 120 | 88.0 | 16 | 12.0 |

TABLE 42

Question : Are you more sensitive to the opinions of others about you?

_____yes _____no

| YES | | NO | | PARTLY | |
|---|---|---|---|---|---|
| # | % | # | % | # | % |
| 103 | 75.5 | 32 | 23.5 | 1 | 1 |

TABLE 43

Question : Do you feel that you can understand other persons' points of view better regardless of whether you agree with them or not?

_____yes _____no

| YES | | NO | |
|---|---|---|---|
| # | % | # | % |
| 128 | 94 | 8 | 6 |

TABLE 14

Question : Has this experience helped you in understanding other people better and making yourself understood?

_____yes _____no

| YES # | YES % | NO # | NO % | MAYBE # | MAYBE % | UNANSWERED # | UNANSWERED % |
|---|---|---|---|---|---|---|---|
| 127 | 93 | 7 | 5 | 1 | 1 | 1 | 1 |

TABLE 15

Question : Do you feel that you can work better as a member of a group when faced with new problems?

_____yes _____no

a. Do you feel that you can clarify the nature of the problem better?

_____yes _____no

b. Do you feel that you can come out with more effective solutions?

_____yes _____no

| | YES # | YES % | NO # | NO % | UNANSWERED # | UNANSWERED % |
|---|---|---|---|---|---|---|
| | 130 | 96 | 6 | 4 | 0 | 0 |
| A. | 125 | 92 | 8 | 6 | 3 | 2 |
| B. | 125 | 92 | 8 | 6 | 3 | 2 |

TABLE 46

Question : If such a training program were offered again:

a. Would you like to participate again?

_____yes _____no

b. Would you like for your friends to participate?

_____yes _____no

| | YES | | NO | | BOTH | | NEITHER | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| A. | 108 | 79.5 | 14 | 10.5 | 2 | 1 | 12 | 9 |
| B. | 120 | 88.5 | 2 | 1 | 0 | 0 | 14 | 10.5 |

Summary:

An effort was made to assess the effects of Human Relations Training on educators. This evaluation utilized internal and external criteria and matched control groups. Internal criteria were measured by the F Scale, the Personal Orientation Inventory, Semantic Differential, Leary's Interpersonal Checklist and the Motivation Analysis Test. External criteria were assessed by Ryan's Rating Scale, the Michigan Picture Test and the Leary Interpersonal Checklist.

Effects of Human Relations Training were studied by examining changes in each of these measures. The implications of the results obtained were discussed in detail.

It seems that educators exposed to Human Relations Training became less authoritarian and more self-actualized. They developed better interpersonal relationships in addition to developing greater self-insight and leadership skills.

A factor analysis was attempted to explain differential changes in behavior over a period of time. Four major factors were described in detail in this context. An effort was made to study the importance of variables like age, sex, marital status, years of teaching experience, church affiliation, etc. in Human Relations Training. The relevant importance of each of these in terms of the different measures was described. An attempt was made to predict changes as a result of Human Relations Training on the basis of prediction equations.

Educators exposed to Human Relations Training were perceived more positively by their supervisors as well as by their students. Students' perceptions of their teachers were described in detail.

It can be safely concluded that Human Relations Training can play a crucial role in the training of educators and thereby in the process of education. Not only does such training help them as persons, but it seems that this improvement in their selves is reflected in a positive manner in their external environment, namely the schools. One might hazard a guess that if all our educators could be exposed to such training at periodic time intervals, the whole process of education would function more efficiently and smoothly.

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